

## **0) Administration rules (use this for all sections)**

1. **Informed consent + confidentiality**
  - “This is for career guidance, not grading. There are no right/wrong answers except in aptitude sections.”
2. **Delivery mode**
  - Prefer online Google Form / LMS quiz.
  - Randomize item order inside each scale when possible.
3. **Response capture**
  - Likert items: 1–5 radio buttons.
  - Aptitude items: MCQ with single correct answer.
  - SJTs: rank / choose best option.
4. **Quality checks**
  - Warn students to answer honestly.
  - Add 2 attention checks across the full battery (e.g., “Select ‘Agree’ for this item.”).

## **1) RIASEC / Holland Interest Inventory (Interest → Career Cluster)**

**Purpose:** Identify what kinds of activities students naturally enjoy, based on Holland’s 6 interest types (Realistic, Investigative, Artistic, Social, Enterprising, Conventional).

[support.neuroworx.io+2openstax.github.io+2](https://support.neuroworx.io+2openstax.github.io+2)

### **Response format:**

“How much would you enjoy doing this?”

1 = Strongly dislike, 2 = Dislike, 3 = Neutral/Unsure, 4 = Like, 5 = Strongly like. (5-point Likert is standard for RIASEC inventories.) [openstax.github.io+1](https://openstax.github.io+1)

### **RIASEC items (48 items; 8 per type)**

#### **R – Realistic (hands-on, tools, outdoors, practical)**

1. Repair a broken appliance or device.
2. Build something using basic tools (wood/metal/electronics).
3. Operate machines or technical equipment.
4. Work on a project that involves physical activity.
5. Assemble or install parts to make something work.
6. Do fieldwork outside a classroom/office.
7. Troubleshoot hardware problems.
8. Learn by doing rather than reading.

#### **I – Investigative (analysis, science, logic, curiosity)**

1. Solve a tough math or logic problem for fun.
2. Explore why something works the way it does.
3. Read or watch science/tech content beyond class.
4. Design an experiment or test an idea.

5. Work with data to find patterns.
6. Enjoy tasks that need deep concentration.
7. Investigate a real-world problem step by step.
8. Prefer evidence before believing a claim.

#### **A – Artistic (creative, ideas, expression, design)**

1. Create artwork, music, content, or performances.
2. Think of unique ways to present ideas.
3. Enjoy writing stories, poems, scripts, or posts.
4. Prefer open-ended tasks over fixed rules.
5. Like experimenting with colors, visuals, or style.
6. Enjoy brainstorming fresh concepts.
7. Notice design/beauty in everyday things.
8. Like expressing feelings through creative work.

#### **S – Social (helping, teaching, teamwork, empathy)**

1. Help someone learn a new skill.
2. Enjoy mentoring juniors or peers.
3. Feel good supporting people in difficulty.
4. Prefer work that benefits others.
5. Like group activities and collaboration.
6. Try to understand people's feelings.
7. Enjoy guiding teams to work better together.
8. Like roles involving care, service, or community.

#### **E – Enterprising (leading, persuading, selling, risk-taking)**

1. Convince others about an idea you believe in.
2. Take leadership in college projects.
3. Enjoy negotiating or closing deals.
4. Like planning events or ventures.
5. Feel energised by competition.
6. Spot opportunities and act quickly.
7. Enjoy giving presentations to influence people.
8. Prefer roles with responsibility and authority.

#### **C – Conventional (order, systems, detail, accuracy)**

1. Organize information in an orderly way.
2. Enjoy working with spreadsheets or records.
3. Prefer clear instructions and structure.
4. Like checking work for errors.
5. Keep things neat and systematically arranged.
6. Enjoy routine tasks that need precision.
7. Follow step-by-step processes comfortably.
8. Like jobs that involve planning and scheduling.

#### **Scoring & output**

- **Sum or average each R/I/A/S/E/C set (8 items each).**
  - **Top 3 scores = Holland Code** (e.g., “IAS”).
  - Map to **career clusters / majors / internship domains.**
- 

## 2) Multi-Aptitude Battery (DAT / GATB style)

**Purpose:** measure relative cognitive strengths across domains commonly used in vocational guidance (verbal, numerical, abstract/logic, spatial/mechanical, clerical).

[talentlens.com+3Careershodh+3Aptitude-test.com+3](http://talentlens.com+3Careershodh+3Aptitude-test.com+3)

**Response format:** MCQ, one correct answer.

**Timing:** suggested ~8–10 minutes per subtest. Speed matters for clerical. [Careershodh+1](http://Careershodh+1)

### A) Verbal Reasoning (8 items)

1. **Analogy:** Book : Reading :: Fork :  
a) Drawing b) Eating c) Writing d) Playing
2. **Synonym:** “Brief” means  
a) Long b) Short c) Angry d) Quiet
3. **Odd one out:**  
a) Apple b) Banana c) Carrot d) Mango
4. **Sentence completion:**  
“He was tired, \_\_\_ he finished the work.”  
a) but b) because c) although d) unless
5. **Antonym:** “Expand” opposite is  
a) Grow b) Stretch c) Shrink d) Improve
6. **Logical statement:**  
All engineers are problem-solvers. Priya is an engineer. Priya is a \_\_\_  
a) teacher b) problem-solver c) artist d) singer
7. **Word meaning in context:**  
“The plan was *feasible*.” feasible =  
a) impossible b) practical c) risky d) funny
8. **Analogy:** Teacher : School :: Doctor :  
a) Court b) Hospital c) Farm d) Factory

**Key:** 1-b, 2-b, 3-c, 4-a, 5-c, 6-b, 7-b, 8-b.

### B) Numerical Ability (8 items)

1. 18% of 200 =  
a) 18 b) 36 c) 56 d) 72
2. If  $x + 7 = 15$ ,  $x =$   
a) 6 b) 7 c) 8 d) 9
3. Average of 6, 8, 10 =  
a) 6 b) 7 c) 8 d) 9
4. Ratio 2:3 equals  
a) 0.5 b) 0.66 c) 1.5 d) 2

5.  $3^2 + 4^2 =$   
a) 7 b) 25 c) 49 d) 16
6. Next number: 5, 10, 20, 40, \_\_\_\_  
a) 45 b) 60 c) 80 d) 100
7. If a shirt costs ₹800 after 20% discount, original price =  
a) 960 b) 1000 c) 1200 d) 1600
8. 0.25 as fraction =  
a) 1/2 b) 1/3 c) 1/4 d) 2/5

**Key:** 1-b, 2-c, 3-c, 4-b, 5-b, 6-c, 7-b, 8-c.

### C) Abstract / Logical Reasoning (8 items)

1. Pattern: ▲ ■ ▲ ■ ▲ \_\_\_\_  
a) ▲ b) ■ c) • d) ♦
2. 2, 6, 12, 20, \_\_\_\_  
a) 24 b) 28 c) 30 d) 32
3. If all Zibs are Lops, and all Lops are Mibs, then all Zibs are \_\_\_\_  
a) Zibs b) Mibs c) Lops only d) none
4. Odd one out:  
a) 3 b) 9 c) 27 d) 40
5. Code: CAT → DBU. DOG → ?  
a) EPH b) EOH c) EPG d) FPH
6. Statement: Some A are B. All B are C. Therefore some A are \_\_\_\_  
a) C b) B only c) not C d) none
7. Sequence: 1, 4, 9, 16, \_\_\_\_  
a) 20 b) 24 c) 25 d) 36
8. Mirror logic: If today is Tuesday, 3 days after the day before yesterday is \_\_\_\_  
a) Monday b) Tuesday c) Wednesday d) Thursday

**Key:** 1-b, 2-c (difference +2,+4,+6,+8,...), 3-b, 4-d, 5-a (each letter +1), 6-a, 7-c, 8-c.

### D) Spatial / Mechanical Reasoning (6 items)

1. Which shape is a rotated version of “L”? (provide 4 rotated L options).
2. If gear A turns clockwise, meshed gear B turns \_\_\_\_  
a) clockwise b) anti-clockwise c) stops d) faster
3. A folded paper with one cut will open into which pattern? (diagram MCQ).
4. A lever: Load is closer to fulcrum than effort. Advantage is \_\_\_\_  
a) >1 b) <1 c) =1 d) 0
5. If a cube is painted on all sides then cut into 27 small cubes, how many have 3 faces painted?  
a) 4 b) 6 c) 8 d) 12
6. When a force is applied at right angles, it produces \_\_\_\_  
a) heat b) motion/torque c) sound d) friction only

**Key (text items):** 2-b, 4-a, 5-b (8 corners), 6-b.

(Items 1 & 3 need diagrams in your form.)

### E) Clerical Speed & Accuracy (5 minutes; 20 items)

**Instruction:** “Mark whether the two strings are exactly same.”

Options: a) Same b) Different

Example items:

1. AB7K9 — AB7K9
  2. 19QW2 — 19QWK
  3. RAREM — RAREN
- ... (make 20 such pairs).

**Scoring:**

- Verbal/Numerical/Abstract/Spatial: 1 mark correct, 0 wrong.
- Clerical: **Correct – Incorrect** to penalize guessing.
- Convert to percentile within cohort.

### 3) Big Five (OCEAN) Personality

**Purpose:** Map personality to learning/work environment and role style. Standard Big Five inventories use 5-point Likert self-report. [PsychoScales Database+3The Fetzer Institute+3Arc+3](#)

**Response format:**

1 = Disagree a lot, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Agree a lot. [Arc](#)

#### Big Five items (30 items; 6 per trait)

##### Openness (O)

1. I enjoy exploring new ideas.
2. I like courses that challenge my thinking.
3. I’m curious about how things can be improved.
4. I appreciate art, design, or creative work.
5. I’m open to changing my opinions with evidence.
6. I enjoy learning beyond what is required.

##### Conscientiousness (C)

7. I plan my tasks before starting.
8. I finish work on time.
9. I double-check details for accuracy.
10. I set goals and work steadily toward them.
11. I keep my study/work space organized.
12. I follow through even when work is boring.

##### Extraversion (E)

13. I enjoy meeting new people.
14. I feel energised in group settings.
15. I speak up easily in class/meetings.
16. I like being the one to start conversations.

17. I'm comfortable leading discussions.
18. I prefer active, fast-paced environments.

### **Agreeableness (A)**

19. I cooperate even when opinions differ.
20. I try to be supportive to teammates.
21. I avoid being harsh or rude in conflicts.
22. I assume good intent in others.
23. I value harmony in groups.
24. I'm willing to help without expecting returns.

### **Neuroticism (N)**

25. I get stressed easily under pressure.
26. I worry about making mistakes.
27. I feel anxious before important tasks.
28. Small problems can upset me a lot.
29. I struggle to relax when things go wrong.
30. I take criticism personally.

## **Scoring & output**

- Reverse score none here (kept all positively keyed except N, which is naturally high=more emotional volatility).
- **Average each trait.**
- Report **O/C/E/A/N levels** (Low/Medium/High) and implications for work style.

## **4) Work Values / Career Anchors (Motivators)**

**Purpose:** Identify what *drives* career satisfaction (security, autonomy, creativity, status, service, lifestyle, etc.). Work Values inventories and Schein's Career Anchors use importance ratings. [Undergraduate Career Services+4PeopleShift+4cdn.cdo.mit.edu+4](http://Undergraduate%20Career%20Services+4PeopleShift+4cdn.cdo.mit.edu+4)

### **Response format:**

“How important is this in your ideal career?”

1 = Not important, 2 = Slightly, 3 = Moderately, 4 = Very, 5 = Extremely important.

[Humanists@Work+1](mailto:Humanists@Work+1)

### **Work Values items (24 items; 3 per value)**

#### **Security/Stability**

1. A predictable job with steady income.
2. Long-term job certainty matters to me.
3. I prefer low-risk career paths.

#### **Autonomy/Independence**

4. Freedom to decide how I work.
5. I dislike being micromanaged.
6. I want control over my schedule.

### **Creativity/Innovation**

7. Chances to create new solutions.
8. Work that lets me experiment.
9. I need variety and originality in tasks.

### **Status/Recognition**

10. Prestige and reputation matter to me.
11. I want my achievements noticed.
12. I'd like to be seen as successful.

### **Impact/Service**

13. I want my work to improve lives.
14. I prefer roles that help society.
15. I feel motivated by meaningful contribution.

### **Financial Reward**

16. High earning potential is a priority.
17. I'm motivated by growth in pay.
18. I'd like performance-linked rewards.

### **Leadership/Influence**

19. I want to guide teams or decisions.
20. I see myself taking responsibility for outcomes.
21. I enjoy influencing direction of work.

### **Lifestyle/Balance**

22. Work should fit my life priorities.
23. I value time for family/health/hobbies.
24. I want flexibility even if pay is lower.

### **Scoring & output**

- Average each value.
- **Top 3 values = primary motivators** → use in career fit + internship filter.

## **5) Employability / 21st-Century Skills Diagnostic + SJT**

**Purpose:** Baseline for placement readiness; convert to skill-upgrade plan. 21st-century skills are commonly measured via self-ratings plus situational judgement tests. [NIE Repository+3Home+3ERIC+3](#)

### **Part A: Self-rating skills (25 items)**

#### **Response format:**

1 = Not like me, 2 = Slightly, 3 = Somewhat, 4 = Mostly, 5 = Very much like me.

#### **Communication**

1. I explain my ideas clearly.

2. I adjust my communication to the audience.
3. I listen actively without interrupting.

### **Teamwork**

4. I contribute reliably in group tasks.
5. I handle disagreements respectfully.
6. I help the team stay on track.

### **Problem solving**

7. I break problems into smaller parts.
8. I generate multiple solutions.
9. I choose solutions based on evidence.

### **Adaptability**

10. I stay calm when plans change.
11. I learn new tools quickly.
12. I handle uncertainty without freezing.

### **Leadership**

13. I take initiative when needed.
14. I motivate peers toward deadlines.
15. I delegate fairly.

### **Digital fluency**

16. I'm comfortable with new software.
17. I use digital tools to organize work.
18. I can learn a tech skill from online resources.

### **Professionalism**

19. I manage time and deadlines well.
20. I take feedback constructively.
21. I communicate progress proactively.

### **Career readiness**

22. I know how to write a strong CV.
23. I can describe my strengths confidently.
24. I seek internships/projects actively.
25. I track my skill gaps and work on them.

**Scoring:** Average each domain → readiness heat-map.

## **Part B: Situational Judgement Test (6 scenarios)**

### **Response format:**

Choose **BEST** and **WORST** option for each scenario. (Best=2, Worst=0, others=1). [NIE Repository](#)

#### **1. Team member not contributing**

Your teammate misses tasks repeatedly. You:

- a) Do their part silently to finish.

- b) Talk privately, ask what's blocking them, agree on a plan.
- c) Complain to the faculty immediately.
- d) Exclude them from the group chat.

**Best:** b | **Worst:** d

**2. Client changes requirements late**

- a) Refuse; say it's too late.
- b) Ask for priority changes and renegotiate timeline.
- c) Agree to everything without checking feasibility.
- d) Ignore and continue old plan.

**Best:** b | **Worst:** d

**3. You made an error in a submission**

- a) Hide it and hope nobody notices.
- b) Inform mentor, correct quickly, explain learning.
- c) Blame the rubric.
- d) Quit the task.

**Best:** b | **Worst:** a

**4. Two teammates are in conflict**

- a) Take sides with your friend.
- b) Facilitate a calm discussion on facts and goals.
- c) Tell them to "grow up."
- d) Leave the team.

**Best:** b | **Worst:** c

**5. You're assigned a task you don't know**

- a) Delay till last day.
- b) Learn basics fast, ask guidance early, deliver in parts.
- c) Say no immediately.
- d) Copy from internet without understanding.

**Best:** b | **Worst:** d

**6. Presentation anxiety before placement talk**

- a) Skip presenting.
- b) Practice small parts, seek feedback, then present.
- c) Read slides without eye contact.
- d) Ask someone else to present for you.

**Best:** b | **Worst:** a

**SJT output:** overall employability judgement score + domain hints.

## **1) Scoring\_Template tab (how to use)**

## What's inside

Columns are already laid out for each battery component:

### A–B: Student info

- Student\_ID, Name

### C–H: RIASEC averages

- R\_avg, I\_avg, A\_avg, S\_avg, E\_avg, C\_avg
- Each is set to calculate: =AVERAGE(R\_items) etc.  
You'll define these named ranges after pasting item responses.

### I: RIASEC Top-3 code

- Formula pulls top three of C–H and concatenates (e.g., “ISA”).  
Holland 3-letter codes are standard interpretation output. [riasectest.com+3Personality](#)  
[Junkie+3The Career Project+3](#)

### J–N: Aptitude raw scores

- Verbal\_raw, Numerical\_raw, Abstract\_raw, Spatial\_raw, Clerical\_raw  
(enter totals per subtest)

### O–S: Aptitude percentiles

- Uses cohort norming with PERCENTRANK.INC, which is how you compare relative strength within a group. [Truity+1](#)  
You'll define ranges like Verbal\_range.

### T–X: Big Five averages

- O\_avg, Cns\_avg, Etr\_avg, Agr\_avg, Neu\_avg  
Uses named ranges like O\_items.  
If you later add reverse-keyed items, reverse-score first (standard Big Five scoring practice). [uasdata.usc.edu+2Wiley Online Library+2](#)

### Y–AF: Work values averages

- Security\_avg ... Lifestyle\_avg
- Top 3 motivators auto-pulled in AG.

### AH–AO: Employability self-rating averages

- Comm\_avg ... CareerReady\_avg

### AP: Employability SJT score

- Enter total SJT points here.

## AQ: Overall Readiness Level

- Rule-based label:
  - avg  $\geq 4 \rightarrow$  High
  - 3–3.99  $\rightarrow$  Medium
  - < 3  $\rightarrow$  Low

## How you fill it (step-by-step)

1. Create a raw-data tab in the same workbook named Raw\_Responses.
2. Paste item-level responses there for each student (one row per student).
3. Highlight each item block and define named ranges:
  - Example: select the 8 Realistic items  $\rightarrow$  Name box  $\rightarrow$  type R\_items.
  - Repeat for I\_items, A\_items, S\_items, E\_items, C\_items.
4. Do same for:
  - Big Five blocks (O\_items, Cns\_items, Etr\_items, Agr\_items, Neu\_items)
  - Work values blocks (Security\_items, etc.)
  - Employability blocks (Comm\_items, etc.)
5. In Aptitude:
  - Enter raw totals in J–N.
  - Define cohort ranges (e.g., a column of Verbal\_raw scores) named Verbal\_range etc.
  - Percentiles will auto-compute.

## 2) Career\_Cluster\_Mapping tab

### What this sheet is for

It helps counselors convert RIASEC top-3 code  $\rightarrow$  career clusters  $\rightarrow$  college stream fit.

This is based on established Holland-type mappings to career fields/clusters. [Career Key Central+3Career Advice | Career Key+3Truity+3](#)

### Columns inside

- RIASEC\_Code (top-3)
- Dominant Types
- Typical Career Clusters
- Common Indian College Streams
- Example Roles/Domains

### How to use it

1. Take student's Top-3 Holland code from Scoring\_Template col I.
2. Find the row with exact or closest code.
3. Use the "Typical Career Clusters" and "Streams" to shortlist:
  - internship domains
  - electives,
  - capstone themes,

- placement pathways.

## Quick fit map (best chances by degree)

- **Software / Web / App Dev:** Best for BCA, BSc, then BCom/BBA/BA if they learn coding + projects. [Talento India+1](#)
  - **Data Analyst / BI / MIS:** Great for BSc (Math/Stats/CS), BCom, BBA, BA Econ, also BCA. [Microsoft Learn+1](#)
  - **UI/UX Designer:** Any degree if portfolio is strong. [Designlab+1](#)
  - **Cybersecurity (SOC/GRC):** Best for BCA, BSc CS/IT, but others can enter via certs + labs. [The Knowledge Academy+1](#)
  - **Cloud Support / DevOps:** Best for BCA, BSc CS/IT, others with Linux + cloud fundamentals. [Business Insider](#)
  - **Digital Marketing & SEO:** Any degree, especially strong for BA/BCom/BBA. [Business Insider](#)
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## Degree-wise clusters + mini-roadmaps

### BA students

#### Best-fit roles (priority order)

1. **Digital Marketing & SEO**
2. **UI/UX Designer**
3. **Data Analyst / MIS** (if comfortable with numbers/tools)
4. Software Dev / Cyber / Cloud (possible but needs stronger tech bridge)

#### Why BA fits

- Communication + creativity + social understanding helps marketing & UX.
- Can enter analytics through Excel/Power BI without deep math. [Business Insider](#)

#### What BA students should learn

- **Marketing track:** SEO, social media, Google/Meta ads basics, Canva, analytics.
- **UX track:** Figma + 3 case studies.
- **Analytics bridge:** Excel → SQL basics → Power BI dashboards. [Designlab+1](#)

#### Starter portfolio ideas

- SEO audit + improvement plan for a local shop
  - Redesign a govt/college website in Figma
  - Power BI dashboard on “AP district education/health data”
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### BCom students

## **Best-fit roles**

1. **Data Analyst / BI / MIS**
2. **Digital Marketing & SEO**
3. **Software/Web Dev** (if BCom Computers or strong coding interest)
4. **UI/UX / Cloud / Cyber** (if they want tech)

## **Why BCom fits**

- Strong base for business metrics, reporting, finance data.
- MIS/BI jobs are a direct extension of Excel/accounting skills. [TimesPro+1](#)

## **What BCom students should learn**

- **Analytics core:** Advanced Excel + SQL + Power BI (must).
- **Business context:** basic KPIs, finance dashboards.
- Optional tech switch: Python basics for analytics.

## **Starter portfolio ideas**

- Sales/profit dashboard in Power BI
  - GST or retail billing data insights
  - Excel automation project (inventory/fee tracker)
- 

# **BSc students (group matters)**

## **If BSc CS/IT/Math/Stats**

### **Best-fit roles**

1. **Software / Web / App Dev**
2. **Data Analyst / BI**
3. **Cybersecurity or Cloud/DevOps**

### **What to learn**

- Dev: Python/Java/JS + SQL + 3 real projects.
- Data: Excel + SQL + Power BI + stats refresh.
- Cyber/Cloud: networking + Linux + entry certs. [Microsoft Learn+1](#)

## **If BSc Life Sciences/Chem/Phy**

### **Best-fit roles**

1. **Data Analyst / MIS** (for lab/health/pharma analytics)
2. **Digital Marketing** (health/pharma/education niches)

3. **UI/UX** (if creative)  
Software/Cyber/Cloud possible but a bigger jump.

### Starter portfolio ideas

- Dashboard on health or lab data
  - Blog/Instagram page on science/health awareness
  - UX case study for a hospital/health app
- 

## BCA students

### Best-fit roles

1. **Software / Web / App Dev**
2. **Cloud Support / DevOps Trainee**
3. **Cybersecurity SOC / GRC**
4. Data Analyst (very doable)  
UI/UX/Digital marketing also possible.

### Why BCA fits

- Direct tech foundation + easier access to internships.
- Companies increasingly hire from UG tech streams for entry roles. [The Economic Times+1](#)

### What to learn

- **Dev core:** one main stack (MERN or Python+Django).
- **Cloud:** Linux + AWS/Azure fundamentals.
- **Cyber:** networking + TryHackMe labs. [The Knowledge Academy+1](#)

### Starter portfolio ideas

- Full-stack app (attendance, bus tracking, local services)
  - Deploy app on AWS free tier
  - SOC-style incident report from lab practice
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## BBA students

### Best-fit roles

1. **Digital Marketing & SEO**
2. **Data Analyst / BI / MIS**
3. **UI/UX Designer (product/business UX)**
4. Software Dev (if they want product-tech roles)

## Why BBA fits

- Business + marketing orientation makes them strong in growth roles.
- Analytics + marketing combo is highly employable. [Business Insider](#)

## What to learn

- **Marketing:** ads + content + analytics.
- **Data bridge:** Excel → SQL → Power BI for business dashboards. [Microsoft Learn+1](#)

## Starter portfolio ideas

- Run a niche Instagram/LinkedIn page, show growth report
  - Marketing funnel dashboard in Power BI
  - UX case study for e-commerce or fintech app
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# Role-wise “who can enter + must-have skills”

(so you can explain it fast)

## A) Software / Web / App Dev

**Can enter:** BCA/BSc CS best; BA/BCom/BBA with coding + projects.

**Must-have:** 1 language + SQL + 3 projects + GitHub.

**Proof:** Deploy 1 project live. [Talento India+1](#)

## B) Data Analyst / BI / MIS

**Can enter:** Any degree; strongest from BSc Math/Stats/CS, BCom, BBA.

**Must-have:** Excel + SQL + Power BI dashboards.

**Proof:** 2 dashboards + 1 case study. [Microsoft Learn+1](#)

## C) UI/UX Designer

**Can enter:** Any degree.

**Must-have:** Figma + UX process + 3 case studies.

**Proof:** Portfolio on Behance/Notion. [Designlab+1](#)

## D) Cybersecurity (SOC/GRC)

**Can enter:** BCA/BSc CS easiest; others via certs + labs.

**Must-have:** Networking + Linux + SOC labs; Security+ / CSA / CEH helps.

**Proof:** TryHackMe/HackTheBox track + incident reports. [The Knowledge Academy+1](#)

## E) Cloud Support / DevOps

**Can enter:** BCA/BSc CS easiest; others with Linux + cloud entry cert.

**Must-have:** Linux + AWS/Azure fundamentals + Git/Docker basics.

**Proof:** Deploy app + CI/CD demo. [Business Insider](#)

## F) Digital Marketing & SEO

**Can enter:** Any degree; BA/BCom/BBA very strong.

**Must-have:** SEO + social + ads basics + analytics.

**Proof:** Manage 1 real page/blog + show results. [Business Insider](#)

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## If you want a simple 6-month plan template

I can write a **6-month curriculum** for each degree stream (monthly skills + projects + assessment).

Tell me whether you want it:

- **as a counselling handout**, or
- **as a semester-wise college integration plan**,  
and I'll format it that way.

You said:

give me both as a sample first

ChatGPT said:

Thought for 9s

Awesome — here are **two samples** you can use right away:

1. a **Counselling Handout (1–2 pages style)** for students/parents
2. a **Semester-wise College Integration Plan (3-year UG)** for  
BA/BCom/BSc/BCA/BBA

Both cover the same **6 roles**:

Software/Web/App Dev • Data Analyst/BI/MIS • UI/UX • Cybersecurity • Cloud/DevOps •  
Digital Marketing/SEO

...and are aligned to AP's high-growth direction + skilling ecosystem. [The Times of India+4](#) [The Financial Express+4](#) [Invest India+4](#)

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# Sample 1: Career Counselling Handout (for students)

## Title: “Top Tech & Business Careers After Degree (AP Students)”

**Who is this for?** BA / BCom / BSc / BCA / BBA students in Andhra Pradesh

**Goal:** Pick 1 main track + 1 backup track and become job-ready in 6 months.

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### The 6 Career Tracks (what they are + who can do them)

#### 1) Software / Web / App Development

**What you'll do:** build websites/apps, solve problems with code.

**Best degrees:** BCA, BSc CS/IT; **others can enter with coding + projects.**

**Must-learn:** One language (Python/Java/JS), SQL, GitHub, 3 projects.

**Proof to show:** GitHub + 1 live project.

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#### 2) Data Analyst / BI / MIS

**What you'll do:** analyze data, build dashboards, support business decisions.

**Best degrees:** BSc Math/Stats/CS, BCom, BBA; **any degree if tools are strong.**

**Must-learn:** Excel → SQL → Power BI/Tableau + basic statistics.

**Proof:** 2 dashboards + 1 case study roadmap. [Microsoft Learn+3GeeksforGeeks+3Guvi+3](#)

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#### 3) UI/UX Designer

**What you'll do:** design app/website screens + user experience.

**Best degrees:** Any degree (portfolio matters).

**Must-learn:** Figma, UX process (personas, wireframes, prototyping).

**Proof:** 3 case studies on Behance/Notion.

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#### 4) Cybersecurity (SOC / GRC)

**What you'll do:** protect systems, monitor attacks, handle risks/compliance.

**Best degrees:** BCA/BSc CS easiest; **others through certs + labs.**

**Must-learn:** Networking basics, Linux, security fundamentals, SOC labs.

**Proof:** TryHackMe/HackTheBox track + incident reports.

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## 5) Cloud Support / DevOps

**What you'll do:** run apps on cloud, automate deployment.

**Best degrees:** BCA/BSc CS easiest; others via Linux + cloud basics.

**Must-learn:** Linux, AWS/Azure fundamentals, Git, Docker basics.

**Proof:** Deploy a small app on cloud.

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## 6) Digital Marketing & SEO

**What you'll do:** grow business online via social media, ads, SEO & analytics.

**Best degrees:** Any degree, especially BA/BCom/BBA.

**Must-learn:** SEO, content, Ads basics, analytics tools.

**Proof:** Manage 1 real page/blog + show results.

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## Degree → Best-fit Tracks (quick matching)

- **BA:** Digital Marketing, UI/UX, Data/MIS
  - **BCom:** Data/MIS, Digital Marketing, optional Software
  - **BSc (CS/Math/Stats):** Software, Data, Cyber/Cloud
  - **BSc (Life/Physical Sci):** Data (health/pharma), Digital Marketing, UI/UX
  - **BCA:** Software, Cloud/DevOps, Cybersecurity, Data
  - **BBA:** Digital Marketing, Data/BI, UI/UX (product/business)
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## 6-Month Success Rule (simple)

1. Choose 1 main + 1 backup track.
  2. Learn the must-have skills in order.
  3. Build proof (projects/portfolio) every month.
  4. Do internship by 2nd year (APSSDC/local companies). [tirupati.ap.gov.in+1](http://tirupati.ap.gov.in+1)
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## Sample 2: Semester-wise College Integration Plan (3-year UG)

### Goal

By the end of Year-3, every BA/BCom/BSc/BCA/BBA student has:

- **1 job track + 1 portfolio**
- **2 internships / live projects**
- **Industry certification + placement readiness**

(AP is expanding digital + green jobs via investments and skilling MoUs, so these tracks are future-proof.) [The Times of India+4](#)[The Financial Express+4](#)[Invest India+4](#)

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## Year 1 (Sem 1–2): Foundation + Exposure

### Sem 1: Core Employability (all degrees)

- English speaking + email writing
- MS Office: Excel basics, PPT
- Digital literacy (AI tools, internet safety)
- Career awareness sessions: showcase all 6 roles

**Output:** baseline aptitude + communication score.

### Sem 2: Track Sampling (choose “try-outs”)

- **Software try-out:** Scratch → Python basics
- **Data try-out:** Excel + charts mini-project
- **UX try-out:** Figma basics (1 redesign task)
- **Cyber try-out:** Networking & safety basics
- **Cloud try-out:** Linux basics lab
- **Marketing try-out:** social media + Canva + SEO intro

**Output:** student selects **Main Track + Backup Track** by end of Sem-2.

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## Year 2 (Sem 3–4): Skill Build + 1st Portfolio

### Sem 3: Track Core Skills

Students split into 6 labs:

- **Software lab:** HTML/CSS/Javascript + 1 web project
- **Data lab:** Excel advanced + SQL basics [GeeksforGeeks+1](#)
- **UX lab:** UX process + wireframes
- **Cyber lab:** Linux, threat basics
- **Cloud lab:** AWS/Azure fundamentals
- **Marketing lab:** SEO + content + analytics basics

**Output:** Track-1 mini portfolio.

### Sem 4: Track Projects + Internship prep

- **Software:** full-stack mini app
- **Data:** Power BI dashboard + case study [GeeksforGeeks+1](#)
- **UX:** 2 case studies
- **Cyber:** SOC lab track + report
- **Cloud:** deploy app on cloud
- **Marketing:** run campaign + report

**Output:** 1st internship ready + portfolio review.

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## Year 3 (Sem 5–6): Industry Readiness + Placement

### Sem 5: Specialization + Internship

- 6–8 week internship / apprenticeship (APSSDC partners, local SMEs, remote) [tirupati.ap.gov.in](#)
- Advanced modules per track (projects with real data/users)

**Output:** Internship certificate + improved portfolio.

### Sem 6: Placement Launchpad

- Resume + LinkedIn + mock interviews
- Aptitude + group discussion
- Capstone project:
  - Software: real client app
  - Data: industry dashboard
  - UX: product redesign for real users
  - Cyber: security audit report
  - Cloud: cloud-hosted system
  - Marketing: growth campaign

**Output:** Placement-grade capstone + final interview readiness.

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## Evaluation system (simple)

Each semester:

- 30% skill test
- 40% project/portfolio
- 30% communication + teamwork

# The 6 Career Tracks (What it is • Who can enter • What to learn • Proof)

## Track A) Software / Web / App Development

**What it is:** Build websites/apps and solve problems by coding.

**Who can enter:**

- Best: **BCA, BSc CS/IT/Math**
- Also possible: **BA/BCom/BBA** with coding + projects.  
AP IT & GCC Policy 2024–29 is expanding IT hiring beyond engineers. [NASSCOM Community+2apit.ap.gov.in+2](https://nasscom.org/community+2apit.ap.gov.in+2)

**Must-learn (6-month order):**

1. Programming: Python / Java / JavaScript
2. Web stack: HTML, CSS, React (or Django/Node)
3. SQL + GitHub
4. 3 real projects

**Proof to show recruiters:**

- GitHub profile
- 1 live deployed project (Netlify/Vercel/AWS free tier)

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## Track B) Data Analyst / BI Executive / MIS Analyst

**What it is:** Use data to find insights and build dashboards for business decisions.

**Who can enter:**

- Strong fit: **BSc Math/Stats/CS, BCom, BBA, BA Economics**
- Anyone can enter with tools + portfolio.

APSSDC + Oracle are training ~4 lakh students in data/AI/cloud — huge demand for analytics-ready grads. [Oracle+2TechGig+2](https://oracle+2TechGig+2)

**Must-learn order:**

1. Excel advanced (pivot, lookup, charts)
2. SQL basics
3. Power BI / Tableau
4. Basic statistics + storytelling

**Proof:**

- 2 Power BI dashboards
- 1 case study: “question → data → insight → recommendation”

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## **Track C) UI/UX Designer**

**What it is:** Design how an app/website looks and how easy it is to use.

**Who can enter:** Any degree (portfolio matters most). [NASSCOM Community](#)

### **Must-learn:**

1. Figma
2. UX process: personas, wireframes, user flows
3. UI basics: typography, colors, layouts
4. Prototyping + presenting design reasoning

### **Proof:**

- 3 case studies on Behance/Notion
  - 1 redesign of a real AP-context product (bus app, hospital app, college portal)
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## **Track D) Cybersecurity (SOC / GRC Entry Level)**

**What it is:** Protect systems, monitor attacks, and support compliance.

**Who can enter:**

- Best: **BCA/BSc CS/IT**
- Others via certifications + labs.

Digital infrastructure expansion in AP IT policy + data centers increases need for cybersecurity support roles. [NASSCOM Community+1](#)

### **Must-learn order:**

1. Networking basics
2. Linux + Windows basics
3. Security fundamentals
4. SOC labs (TryHackMe/HackTheBox)

### **Proof:**

- 1 completed SOC lab track
  - 2 short incident-analysis reports
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## **Track E) Cloud Support / DevOps Trainee**

**What it is:** Run apps on cloud and automate deployments.

**Who can enter:**

- Best: **BCA/BSc CS/IT**
- Others with Linux + cloud fundamentals.

AP's IT & Data Center push makes cloud support roles a steady fresher pathway.

[apit.ap.gov.in+1](http://apit.ap.gov.in+1)

**Must-learn order:**

1. Linux + networking basics
2. AWS/Azure fundamentals (AWS CCP / AZ-900)
3. Git + Docker basics
4. Deploy a sample app

**Proof:**

- One app deployed on cloud
  - Simple CI/CD demo from GitHub
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## Track F) Digital Marketing & SEO

**What it is:** Grow businesses online (social media, ads, SEO, content, analytics).

**Who can enter:** Any degree; very strong for BA/BCom/BBA.

AP's MSME/industry growth + tourism + local brands create many marketing entry roles.

[The Times of India+1](http://The Times of India+1)

**Must-learn order:**

1. SEO basics
2. Social media + Canva
3. Google/Meta ads intro
4. Analytics tools (GA4 / Search Console)

**Proof:**

- Real Instagram/page/blog you managed
  - 1 campaign report showing results
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## Degree → Best Fit Tracks (Top 2 + Backup)

- **BA:**
  1. Digital Marketing 2) UI/UX | Backup: Data/MIS
- **BCom:**

1. Data/BI/MIS 2) Digital Marketing | Backup: Software (if computers)
  - **BSc (CS/IT/Math/Stats):**
    1. Software Dev 2) Data | Backup: Cyber/Cloud
  - **BSc (Life/Physical Sciences):**
    1. Data (health/pharma/agri) 2) Digital Marketing (niche) | Backup: UI/UX
  - **BCA:**
    1. Software Dev 2) Cloud/DevOps | Backup: Cybersecurity or Data
  - **BBA:**
    1. Digital Marketing 2) Data/BI | Backup: UI/UX (business/product)
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## AP District-Wise Examples (helps students visualize)

- **North Coastal Zone (Vizag/Srikakulam/Vizianagaram):** IT services, ports, logistics, pharma → **Software, Data, Digital Marketing, Logistics analytics** [The Times of India+2apexports.ap.gov.in+2](http://The Times of India+2apexports.ap.gov.in+2)
  - **Central Coastal Zone (Amaravati/Vijayawada/Guntur/Prakasam):** agro-processing + logistics → **Data/MIS, Digital Marketing, ERP ops, supply-chain analytics** [The Times of India+1](http://The Times of India+1)
  - **Rayalaseema (Tirupati/Chittoor/Kurnool/Anantapur):** renewable energy + tourism → **Green-energy project roles, Cloud/Cyber support for new hubs, Digital Marketing, UX for service apps** [The Times of India+2JMK Research & Analytics+2](http://The Times of India+2JMK Research & Analytics+2)
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## “6-Month Job-Ready Rule”

1. Pick **1 Main Track + 1 Backup**
  2. Learn skills in the right order (don't mix everything)
  3. Build **proof** every month
  4. Internship by **2nd year end** (APSSDC/SMEs/remote). [Oracle+1](http://Oracle+1)
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## 2) Full Semester-wise College Integration Plan (3-Year UG)

### Goal

By graduation, every UG student has:

- **Track-aligned skills**
- **Portfolio + certifications**

- **2 internships / live projects**
- **Placement readiness**

Aligned to AP's policies: IT & GCC growth, clean energy workforce, port-led logistics, and MSME acceleration. [The Times of India+NASSCOM](#)  
[Community+4JMK Research & Analytics+](#)

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## Year 1 — Foundation + Track Discovery

### Sem 1 (Weeks 1–16): Universal Employability

#### All degrees

- Communication: spoken English, email, presentations
- Digital foundation: MS Office + AI tools for productivity
- Aptitude basics (reasoning/quant)
- Career awareness workshops for 6 tracks

#### Outputs

- Diagnostic scores (English, aptitude, digital)
  - Student career interest profile
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### Sem 2 (Weeks 1–16): Track Sampling Labs

Rotate students through 6 mini-labs (2–3 weeks each):

1. **Software try-out:** logic + Python intro
2. **Data try-out:** Excel dashboards mini task
3. **UX try-out:** Figma + 1 screen redesign
4. **Cyber try-out:** internet safety + networking basics
5. **Cloud try-out:** Linux commands + cloud concept demo
6. **Marketing try-out:** Canva + SEO intro + social post plan

#### Outputs

- Student chooses **Main Track + Backup Track**
  - 1 mini-portfolio artifact
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## Year 2 — Track Core + First Portfolio + Internship Prep

### Sem 3: Core Skills by Track

## **Software lab**

- HTML/CSS/JS
- 1 static + 1 dynamic website

## **Data lab**

- Excel advanced
- SQL foundation
- 1 dashboard [Oracle](#)

## **UX lab**

- UX process
- 1 wireframe + prototype

## **Cyber lab**

- Networking + Linux basics
- Threat types, phishing labs

## **Cloud lab**

- Linux + AWS/Azure fundamentals
- 1 cloud sandbox lab [Oracle+1](#)

## **Marketing lab**

- SEO + content fundamentals
- Social media calendar + analytics intro

## **Outputs**

- Track skills test
  - Portfolio v1 (at least 1 track project)
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## **Sem 4: Projects + Internship Readiness**

### **Software**

- Full-stack mini app

### **Data**

- Power BI dashboard + case study [Oracle+1](#)

### **UX**

- 2 case studies (one AP service problem)

### Cyber

- SOC lab track + 1 incident report

### Cloud

- Deploy app on AWS/Azure free tier

### Marketing

- Run 1 real campaign (college/local business) + report

### Outputs

- Internship shortlist
  - Portfolio review panel
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## Year 3 — Specialization + Internship + Placement

### Sem 5: Internship + Advanced Skills

- 6–8 week internship/apprenticeship
  - APSSDC partners, IT firms, ports/logistics orgs, renewable energy vendors, MSMEs. [Oracle+1](#)
- Advanced track modules:
  - Software: APIs/auth/deployment
  - Data: DAX + domain KPIs
  - UX: usability testing
  - Cyber: SIEM intro + SOC workflow
  - Cloud: monitoring + Docker
  - Marketing: ads + conversion funnels

### Outputs

- Internship certificate
  - Portfolio v2 with real-world work
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### Sem 6: Placement Launchpad + Capstone

#### Common placement prep

- Resume + LinkedIn + mock HR/tech interviews
- Aptitude revision

- Group discussion + workplace etiquette

### **Track capstones**

- Software: real client app (college/SME)
- Data: industry dashboard with recommendations
- UX: product redesign validated with users
- Cyber: security audit + SOC report
- Cloud: cloud-hosted system + CI/CD
- Marketing: 8-week growth campaign + ROI report

### **Outputs**

- Placement-grade capstone
  - Final readiness score
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### **Assessment System (each semester)**

- 30% skill tests
  - 40% projects/portfolio
  - 30% communication + teamwork + professionalism
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## **Bonus: 6-Month “Main Track + Backup Track” Micro-Plan (Use inside counselling)**

**Month 1:** foundation skills

**Month 2–3:** core technical modules

**Month 4:** project 1

**Month 5:** project 2 + internship outreach

**Month 6:** capstone + interview prep

# Functional Requirements Document (FRD)

## Project Name

Rareminds Career Assessment Battery – 4th Semester UG

## Version

v1.0 (Sample FRD)

## Owner / Stakeholders

- **Product Owner:** Rareminds Career Guidance Team
  - **Primary Users:** 4th-sem students, Career Counselors, College Admins
  - **Tech Users:** Platform Admin, Developer, Data Analyst
- 

## 1. Purpose & Objectives

### 1.1 Purpose

Build a digital module to **conduct a standardized core psychometric battery** for all 4th-semester students, plus **stream-specific assessments and aptitude**, and generate **career cluster recommendations and skill development plans**.

### 1.2 Objectives

1. Deliver a reliable, scalable assessment experience for large cohorts.
  2. Capture:
    - **Interest fit (RIASEC/Holland)**
    - **Aptitude strengths (Multi-Aptitude battery)**
    - **Personality style (Big Five/OCEAN)**
    - **Work values/anchors**
    - **Employability/21st-century skills + SJT**
  3. Add **stream-specific assessment** to validate domain readiness.
  4. Output:
    - **Career cluster + role suggestions**
    - **Stream-specific pathways**
    - **Strength-weakness dashboard**
    - **Actionable skilling plan**
  5. Enable counselors to track, filter, and download reports.
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## 2. Scope

## **2.1 In Scope**

- Student onboarding & authentication (college roster import).
- Assessment engine supporting:
  1. RIASEC / Holland Interest Inventory
  2. Multi-Aptitude Battery (DAT/GATB style)
  3. Big Five Personality (OCEAN)
  4. Work Values / Career Anchors
  5. Employability/21st-century Skills + Situational Judgment Test (SJT)
  6. Stream specific assessments (5 streams)
- Scoring, normalization, composite profiles.
- Career cluster mapping rules engine.
- Report generation (student + counselor + college view).
- Admin console for batches, scheduling, monitoring.
- Data export.

## **2.2 Out of Scope (Phase 1)**

- AI-based counseling chat.
  - Video proctoring (simple integrity checks only).
  - Adaptive testing (can be Phase 2).
  - External job platform integrations.
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# **3. User Roles & Permissions**

## **3.1 Roles**

1. **Student**
  - Takes assessments
  - Views own report
2. **Counselor**
  - Views cohort + student reports
  - Adds notes/recommendations
  - Downloads reports
3. **College Admin**
  - Uploads/validates student list
  - Schedules assessment window
  - Tracks completion
4. **Platform Admin (Rareminds)**
  - Configures tests
  - Manages scoring + mapping tables
  - Manages colleges/batches

## **3.2 Permission Matrix (summary)**

Feature	Student	Counselor	College Admin	Platform Admin	Admin
Take tests	✓	✗	✗	✗	✗
View own report	✓	✓ (all students)	✓ (aggregate)	✓	✓
Edit mapping/scoring	✗	✗	✗	✓	✓
Schedule tests	✗	✗	✓	✓	✓
Export data	✗	✓	✓	✓	✓

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## 4. Assessment Battery Requirements

### 4.1 Overall Battery Structure

Battery order is fixed unless admin changes:

1. RIASEC Interests
2. Multi-Aptitude
3. Big Five
4. Work Values
5. Employability + SJT
6. Stream-Specific Assessment

System must allow **pauses between modules**, but not within timed subtests.

### 4.2 RIASEC / Holland Interest Inventory

**Goal:** Identify interest types → map to career clusters.

#### Functional requirements

- 6 scales: Realistic, Investigative, Artistic, Social, Enterprising, Conventional.
- Item type: Likert (e.g., “Like / Neutral / Dislike” or 5-point).
- Output:
  - Top 3 codes (e.g., I-A-S)
  - Percentile/normalized scores per scale
- Must support **reverse items** if used.

#### Admin configs

- Item bank management (create/edit/deactivate).
- Scoring keys per item.

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### 4.3 Multi-Aptitude Battery (DAT/GATB style)

**Goal:** compare cognitive strengths across areas.

## **Subtests required**

1. Verbal reasoning
2. Numerical ability
3. Abstract/Logical reasoning
4. Spatial/Mechanical reasoning
5. Clerical speed & accuracy

## **Functional requirements**

- Each subtest is **timed** separately.
- Mixed formats:
  - MCQ
  - Fill-in numeric
  - Image-based for spatial/mechanical
- Auto-advance when time ends.
- Randomize order within subtest.

## **Outputs**

- Raw score
- Normalized percentile (relative to cohort norms)
- Aptitude profile graph
- Top 2 and bottom 2 aptitudes flagged.

## **Integrity**

- Disable backtrack (configurable).
  - One question on screen at a time.
- 

## **4.4 Big Five Personality (OCEAN)**

**Goal:** work style & environment fit.

## **Functional requirements**

- 5 scales: Openness, Conscientiousness, Extraversion, Agreeableness, Neuroticism.
  - Likert items with reverse scoring support.
  - Output:
    - Scale scores + interpretation bands (Low/Med/High)
    - Narrative summary for each scale
- 

## **4.5 Work Values / Career Anchors**

**Goal:** motivation drivers for role fit.

## **Functional requirements**

- Values dimensions:
    - Security/Stability
    - Status/Recognition
    - Creativity/Innovation
    - Autonomy/Independence
    - Impact/Service
    - Lifestyle/Balance
    - Learning/Growth
    - Leadership/Power (if included)
  - Item format: Likert or forced ranking (admin selectable).
  - Output:
    - Top 3 values
    - Heatmap of all values
- 

## **4.6 Employability / 21st-Century Skills + SJT**

**Goal:** readiness for internships/placements + development plan.

### **Sub-components**

1. Self-rating diagnostic:
  - Communication
  - Teamwork
  - Problem-solving
  - Adaptability
  - Leadership
  - Digital fluency
2. **SJT scenarios**
  - 8–12 workplace micro-cases
  - Select best response (MCQ)

### **Outputs**

- Skill scores
  - SJT correctness band
  - “Skill upgrade plan” auto-generated
- 

## **5. Stream-Specific Assessments**

Each student must receive **exactly one stream-specific assessment** based on roster.

### **5.1 Common Requirements for Stream Tests**

- Timed or untimed (admin configurable).
  - 25–40 items mix:
    - Core domain knowledge
    - Applied case questions
  - Outputs:
    - Domain readiness score
    - Sub-skill breakdown
    - Fit with stream-aligned roles
- 

## 5.2 Stream: B.Sc Computer Science

### Sub-skills

- Programming fundamentals (logic, syntax)
- Data structures basics
- Databases & SQL concepts
- Algorithms/problem-solving
- CS applications (OS, networks intro)

### Example item types

- Code reading MCQ
- Output prediction
- Small logic puzzles

### Mapped roles

Software Dev, Data Analyst, QA, Cloud support, Cybersecurity trainee.

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## 5.3 Stream: BCA General

### Sub-skills (simpler CS-applied)

- Programming + OOP basics
- Web/app concepts
- DBMS basics
- IT troubleshooting & digital systems

### Mapped roles

Web/App dev trainee, IT support, MIS/Data support, Cloud support trainee.

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## 5.4 Stream: BBA General

### Sub-skills

- Business fundamentals
- Finance/accounting basics
- Marketing concepts
- HR/operations case sense
- Basic analytics in business

#### **Item types**

- Business case MCQs
- Simple data interpretation

#### **Mapped roles**

BFSI ops, Sales/BD, Business analyst trainee, HR exec, Marketing exec.

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## **5.5 Stream: BBA Digital Marketing**

#### **Sub-skills**

- Digital marketing platforms & terms
- SEO/SEM fundamentals
- Social media strategy
- Content & branding basics
- Marketing analytics basics

#### **Item types**

- Campaign decision cases
- SEO keyword/application Qs

#### **Mapped roles**

Digital marketing exec, SEO exec, performance marketing trainee, content strategist.

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## **5.6 Stream: B.Sc Animation**

#### **Sub-skills**

- Visual storytelling & composition
- Design principles (color/typography)
- 2D/3D animation concepts
- Software awareness (Blender/Maya/AE basics)
- Creative problem solving

#### **Item types**

- Image-based MCQs
- Sequence/scene interpretation

- Concept application

### Mapped roles

2D/3D animator trainee, UI/UX designer, motion graphics, game art trainee.

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## 6. Test Delivery & Student Flow

### 6.1 Pre-Assessment

1. Student logs in (college SSO or OTP).
2. Consent + instructions.
3. System checks:
  - device/browser compatibility
  - stable connection (minimum threshold)

### 6.2 During Assessment

1. Battery shown as modules with progress bar.
2. Timed subtests show countdown + auto-submit.
3. Save answers per question.
4. Allow breaks between modules only.

### 6.3 Post-Assessment

1. Instant submission confirmation.
  2. Score processing (async internal OK, but student sees “Report will appear once processed”).
  3. Student dashboard updates when report ready.
- 

## 7. Scoring & Mapping Engine

### 7.1 Scoring Requirements

- Each test has:
  - Raw score
  - Standardized score (z/percentile)
  - Interpretation band
- Reverse key support for personality/values.

### 7.2 Composite Profile

Battery yields a **4-layer profile**:

1. **Interest code (RIASEC)**

2. **Aptitude stack rank**
3. **Personality fit indicators**
4. **Values drivers**
5. **Employability readiness**
6. **Stream readiness**

### **7.3 Career Cluster Mapping**

Rules engine must:

- Take Top RIASEC code(s) → primary clusters.
- Adjust clusters using:
  - Aptitude strengths
  - Personality fit
  - Values fit
  - Stream readiness threshold

#### **Example rule**

If Interest = I-A-S and Aptitude top = Abstract + Numerical

→ Recommend **Data/AI, Software Dev, Product Design**

If Stream readiness low, show “foundation pathway.”

### **7.4 Configurability**

- Admin can edit:
  - cluster library
  - mapping rules
  - thresholds
  - narrative templates

## **8. Reports & Dashboards**

### **8.1 Student Report (PDF + web)**

#### **Sections**

1. Overall summary page
2. RIASEC code + meaning
3. Aptitude profile graph
4. Big Five summary
5. Work values heatmap
6. Employability + SJT results
7. Stream readiness
8. Career clusters + roles (Top 3)
9. Skill upgrade plan (next 6 months)
10. Personalized “next steps”

## **8.2 Counselor Dashboard**

- Filter by college / stream / batch / gender (optional) / completion status.
- Sort by:
  - high potential in a cluster
  - low employability readiness
- View individual report + counselor notes.

## **8.3 College Admin Dashboard**

- Completion tracker:
  - total students
  - started / in-progress / completed
- Aggregate heatmaps:
  - interest distribution
  - aptitude distribution
  - cluster demand

## **8.4 Exports**

- CSV export of anonymized profiles.
  - PDF bulk download.
- 

# **9. Admin Console Requirements**

## **9.1 Batch Management**

- Create batch (college, year, semester).
- Upload roster CSV (name, reg no, stream, email/phone).
- System validates duplicates + missing stream.

## **9.2 Scheduling**

- Set assessment window:
  - start date/time
  - end date/time
- Optional “lab mode” (all students start together).

## **9.3 Monitoring**

- Live status log.
- Flag anomalies (very fast completion, repeated disconnects).

## **9.4 Content Management**

- Item bank CRUD.

- Versioning of test forms.
  - Enable/disable forms per batch.
- 

## 10. Non-Functional Requirements (NFR)

### 10.1 Performance

- Support **500–1000 concurrent students** per college window.
- Page load < 3 seconds average.
- Autosave latency < 1 second.

### 10.2 Reliability

- Auto-resume after disconnect within 30 minutes.
- No data loss on refresh.

### 10.3 Security & Privacy

- Encrypt data at rest and in transit.
- Role-based access control.
- Student consent required.
- Reports visible only to authorized users.
- Data retention policy configurable per college.

### 10.4 Accessibility

- Mobile + desktop responsive.
  - English default; Telugu optional Phase 2.
  - Readable fonts, color-safe charts.
- 

## 11. Data Model (High Level)

### 11.1 Entities

1. **User**
  - user\_id, name, role, college\_id
2. **StudentProfile**
  - user\_id, stream, semester, batch\_id
3. **Assessment**
  - assessment\_id, type, version, config
4. **AssessmentSession**
  - session\_id, user\_id, assessment\_id, status, timestamps
5. **Item**
  - item\_id, assessment\_id, text, options, correct\_key, reverse\_key

6. **Response**
    - o response\_id, session\_id, item\_id, answer, time\_taken
  7. **Scores**
    - o user\_id, assessment\_id, raw, normalized, band
  8. **CareerMapping**
    - o mapping\_id, ruleset\_version, cluster\_scores
  9. **Report**
    - o report\_id, user\_id, pdf\_url, generated\_at
- 

## 12. Acceptance Criteria

### 12.1 Assessment Delivery

- Student can complete full battery without navigation errors.
- Timed sections auto-submit correctly.
- Auto-resume works when internet drops.

### 12.2 Scoring Accuracy

- All assessments score correctly with reverse keys.
- Percentile normalization matches configured norms.
- Career cluster output matches mapping rules.

### 12.3 Reporting

- Student report generated within system SLA after submission.
- PDFs downloadable by counselor/admin.
- Dashboards show accurate completion status.

### 12.4 Admin Capabilities

- Admin can create batches, upload rosters, schedule windows.
  - Admin can edit/activate/deactivate items and tests.
- 

## 13. Phase Plan (Suggested)

### Phase 1 (MVP)

- Core battery + 5 stream tests
- Basic mapping engine
- Student report + counselor dashboard
- CSV/PDF export

### Phase 2

- Adaptive aptitude

- Telugu localization
- Advanced analytics & early-risk flags
- Proctoring enhancements

# A. Core Battery — Full Original Questionnaires

## A1) RIASEC / Holland-style Interest Inventory (Original)

### **Response scale (all items):**

1 = Strongly Dislike • 2 = Dislike • 3 = Neutral • 4 = Like • 5 = Strongly Like

### **Items (60 total; 10 per R/I/A/S/E/C)**

Mark how much you would like doing each activity.

#### **Realistic (R)**

- R1. Repair a broken gadget or appliance.
- R2. Work outdoors with tools or machines.
- R3. Assemble or set up equipment by following instructions.
- R4. Operate a drone/camera rig or other technical device.
- R5. Troubleshoot hardware issues in a lab or workshop.
- R6. Handle materials in a hands-on, practical task.
- R7. Drive/operate vehicles or machinery for work.
- R8. Build something physical from available parts.
- R9. Inspect and test devices for defects.
- R10. Work in environments that require physical activity.

#### **Investigative (I)**

- I1. Solve a complex puzzle using logic.
- I2. Analyze data to find patterns.
- I3. Learn scientific/technical concepts deeply.
- I4. Experiment to see “why” something happens.
- I5. Read about AI/space/medicine/new discoveries.
- I6. Use math or coding to answer questions.
- I7. Compare multiple explanations before deciding.
- I8. Design a study/survey to test an idea.
- I9. Work on problems without a clear answer.
- I10. Enjoy research more than routine tasks.

#### **Artistic (A)**

- A1. Create illustrations, posters, or visual stories.
- A2. Express ideas through design, animation, or music.
- A3. Prefer flexible rules over strict procedures.
- A4. Invent new ways to present content.
- A5. Enjoy brainstorming imaginative solutions.
- A6. Like roles involving aesthetics or style.
- A7. Produce videos/graphics to communicate messages.
- A8. Write or script stories for an audience.

A9. Experiment with colors, shapes, and forms.

A10. Enjoy work where originality matters.

## Social (S)

S1. Teach or mentor someone.

S2. Support people in solving personal/academic issues.

S3. Work in teams to help others succeed.

S4. Explain ideas patiently to different kinds of people.

S5. Volunteer for community or social causes.

S6. Prefer people-facing roles over technical-only work.

S7. Listen and mediate conflicts.

S8. Enjoy guiding friends toward decisions.

S9. Feel energized by helping others learn/grow.

S10. Like workplaces focused on service.

## Enterprising (E)

E1. Convince others to accept your idea.

E2. Lead a group to achieve a goal.

E3. Negotiate to get the best outcome.

E4. Enjoy risk and competition.

E5. Start a small business or project.

E6. Set targets and drive results.

E7. Present confidently to a crowd.

E8. Take charge when others hesitate.

E9. Prefer decision-making roles.

E10. Like selling, marketing, or pitching.

## Conventional (C)

C1. Maintain records neatly and accurately.

C2. Follow step-by-step processes.

C3. Work with spreadsheets or accounts.

C4. Organize files/data systematically.

C5. Prefer structured tasks with clear rules.

C6. Check details to avoid errors.

C7. Enjoy routine admin/operations work.

C8. Track budgets, schedules, or inventories.

C9. Like roles requiring precision and order.

C10. Feel satisfied completing tasks correctly.

## Scoring

- Sum items within each type → R, I, A, S, E, C raw scores (10–50).
  - Convert to percentile using cohort norms.
  - **Top 3 codes = student Holland code** (e.g., I-A-S).
-

## A2) Multi-Aptitude Battery (Original DAT-style)

**Format:** MCQ; 1 correct answer each.

**Timing:**

- Verbal 12 min (20 Q)
- Numerical 12 min (20 Q)
- Abstract/Logical 10 min (15 Q)
- Spatial/Mechanical 10 min (15 Q)
- Clerical Speed & Accuracy 6 min (30 Q rapid)

Below are **sample item banks**; you can expand using the same patterns.

### (1) Verbal Reasoning — 20 items

V1. Choose the word closest in meaning to “*implement*”:

- a) hide b) execute c) delay d) forget

V2. *Book : Author :: Song : ?*

- a) Singer b) Listener c) Poet d) Painter

V3. Choose the odd one out:

- a) cautious b) careful c) vigilant d) reckless

V4. “Despite the rain, the match continued.”

Meaning of *despite*:

- a) because of b) in place of c) even though d) apart from

V5. Select the best sentence:

- a) He don’t like coffee.  
b) He doesn’t likes coffee.  
c) He doesn’t like coffee.  
d) He not like coffee.

V6. Antonym of “*scarce*”:

- a) rare b) limited c) abundant d) small

V7. If all Zaps are Nips and all Nips are Loms, then all Zaps are:

- a) Loms b) Zaps c) not Nips d) none

V8. Choose correct analogy:

*Finger : Hand :: Leaf : ?*

- a) tree b) root c) fruit d) seed

V9. Best title for a passage about recycling benefits:

- a) Waste management b) Pollution c) Buying habits d) City traffic

V10. Synonym of “*transparent*”:

- a) clear b) heavy c) dark d) sharp

V11–V20. Use mixture of: inference, sentence completion, analogy, antonym/synonym.

**Answer key (sample):** V1-b, V2-a, V3-d, V4-c, V5-c, V6-c, V7-a, V8-a, V10-a.

---

## (2) Numerical Ability — 20 items

N1. 15% of 240 =

- a) 24 b) 30 c) 36 d) 48

N2. If  $x + 7 = 19$ ,  $x =$

- a) 10 b) 11 c) 12 d) 13

N3. A train covers 120 km in 3 hrs. Speed =

- a) 30 b) 35 c) 40 d) 45 km/h

N4. Ratio of 3:5 equals

- a) 0.3 b) 0.6 c) 0.8 d) 1.5

N5. Next number: 2, 6, 12, 20, \_\_

- a) 24 b) 30 c) 32 d) 36

N6. Simple interest on ₹1000 at 10% for 2 yrs =

- a) 100 b) 150 c) 200 d) 250

N7. If 5 pens cost ₹50, 1 pen costs ₹\_\_

- a) 5 b) 8 c) 10 d) 12

N8.  $\frac{3}{4}$  of 64 =

- a) 36 b) 48 c) 52 d) 56

N9. A shop gives 20% discount on ₹500. New price =

- a) 350 b) 380 c) 400 d) 450

N10. Average of 8, 12, 16 =

- a) 10 b) 12 c) 14 d) 16

N11–N20 similar.

**Answer key (sample):** N1-c, N2-c, N3-c, N4-b, N5-c, N6-c, N7-c, N8-b, N9-c, N10-c.

---

## (3) Abstract/Logical Reasoning — 15 items

A1. Find the next pattern:

**AB, BCD, CDEF, DEFGH, \_\_**

- a) EFGHI b) EFGHIJ c) FGHIJ d) EFGH

A2. Odd one out:

- a) 2-4-8-16 b) 3-6-12-24 c) 5-10-15-20 d) 7-14-28-56

A3. If “PEN” is coded as 16-5-14, “BOOK” is

- a) 2-15-15-11 b) 2-15-15-11-5 c) 2-15-15-11-0 d) 3-15-15-11

A4. Statement: All artists are creative. Some creatives are introverts.

Conclusion: Some artists are introverts.

- a) True b) False c) Cannot say d) Both true & false

A5. Series: 1, 4, 9, 16, 25, \_\_\_\_

- a) 30 b) 36 c) 40 d) 49

A6–A15 similar (seating, syllogisms, series).

**Answer key (sample):** A1-b, A2-c, A4-c, A5-b.

---

#### **(4) Spatial/Mechanical Reasoning — 15 items**

(Use image items in platform; below are text-based equivalents.)

S1. A cube is painted on all sides then cut into 27 equal cubes.

How many small cubes have paint on exactly one face?

- a) 6 b) 8 c) 12 d) 24

S2. If a gear A turns clockwise, the adjacent gear B turns:

- a) clockwise b) anticlockwise c) same speed clockwise d) stops

S3. Mirror image of “F” looks like:

- a) backward F b) same F c) rotated F d) none

S4. Paper folded twice and punched once. How many holes when opened?

- a) 2 b) 3 c) 4 d) 8

S5. Which net can form a cube? (image)

S6–S15 similar.

---

#### **(5) Clerical Speed & Accuracy — 30 items rapid**

**Task types (mix):**

- Find exact match pairs.
- Detect wrong digit/letter in sequences.
- Simple data checking.

C1. Which is identical to: **K7P9Q**  
a) K7P9O b) K7P9Q c) K7P8Q d) K7R9Q

C2. Spot the different one:  
a) 984271 b) 984271 c) 984271 d) 984127

... up to C30.

### **Scoring**

- 1 mark correct, 0 wrong (no negative for speed tests).
  - Convert each subtest to percentile.
  - Aptitude profile = 5 bars + “top strengths / development areas”.
- 

## **A3) Big Five Personality (Original IPIP-aligned)**

**Scale:** 1 Strongly Disagree → 5 Strongly Agree  
**50 items (10 per trait), all original wording**

### **Openness (O)**

- O1. I enjoy exploring new ideas even if they challenge my beliefs.
- O2. I like learning about topics outside my main field.
- O3. I get excited by creative or unconventional projects.
- O4. I enjoy art, design, or storytelling.
- O5. I prefer variety over routine.
- O6. I’m curious about how things work.
- O7. I like experimenting with new tools or methods.
- O8. I find abstract thinking interesting.
- O9. I enjoy imagining future possibilities.
- O10. I adapt quickly to new concepts.

### **Conscientiousness (C)**

- C1. I plan tasks before starting them.
- C2. I complete work on time.
- C3. I pay attention to details.
- C4. I stay focused even on boring tasks.
- C5. I keep my workspace and files organized.
- C6. I follow through on promises.
- C7. I prefer clear goals and checklists.
- C8. I am consistent in my effort.
- C9. I avoid last-minute rush.
- C10. I double-check my work.

### **Extraversion (E)**

- E1. I feel energized after meeting new people.
- E2. I enjoy taking the lead in group discussions.
- E3. I speak up easily in class/team settings.
- E4. I like roles involving interaction.
- E5. I find it easy to start conversations.
- E6. I prefer working with others over working alone.
- E7. I am comfortable presenting to a group.
- E8. I enjoy being part of active communities.
- E9. I express my opinions confidently.
- E10. I seek social engagement.

### **Agreeableness (A)**

- A1. I try to understand people's feelings.
- A2. I help others even when not asked.
- A3. I value harmony in teams.
- A4. I respect different viewpoints.
- A5. I avoid being harsh in feedback.
- A6. I cooperate rather than compete.
- A7. I forgive mistakes easily.
- A8. I'm patient with slow learners.
- A9. I support friends in difficulty.
- A10. I prefer fair outcomes.

### **Emotional Stability / Neuroticism (N) (reverse)**

- N1. I worry about small things.
- N2. I feel tense under pressure.
- N3. I overthink past mistakes.
- N4. I get upset easily by criticism.
- N5. I feel anxious before tasks.
- N6. I find it hard to relax.
- N7. I feel insecure about my abilities.
- N8. I get stressed in uncertain situations.
- N9. My mood changes quickly.
- N10. I expect things may go wrong.

### **Scoring**

- Trait score = sum of 10 items (10–50).
- Neuroticism can be inverted to “Emotional Stability” for reporting.
- Convert to bands (Low/Med/High) via norms.

## **A4) Work Values / Career Anchors (Original)**

**Scale:** 1 Not Important → 5 Extremely Important

**40 items (5 per value)**

## **Security/Stability**

- S1. Having assured income matters most to me.
- S2. I prefer predictable job roles.
- S3. Long-term job security is a priority.
- S4. I seek organizations with stable growth.
- S5. I want low risk in career decisions.

## **Status/Recognition**

- R1. I want my achievements to be visible.
- R2. Titles/designations motivate me.
- R3. I like being known for my work.
- R4. Awards and recognition matter to me.
- R5. I enjoy competitive environments.

## **Creativity/Innovation**

- C1. I want freedom to create new things.
- C2. I enjoy solving problems in original ways.
- C3. Routine work drains me.
- C4. I prefer roles needing imagination.
- C5. I like experimenting with ideas.

## **Autonomy/Independence**

- A1. I prefer deciding my own work methods.
- A2. I dislike micromanagement.
- A3. Flexible schedules matter to me.
- A4. I work best with minimal supervision.
- A5. I want ownership of tasks.

## **Impact/Service**

- I1. I want my work to help society.
- I2. I feel satisfied when others benefit.
- I3. I'm drawn to meaningful causes.
- I4. I prefer ethically aligned organizations.
- I5. I want to make a difference.

## **Lifestyle/Balance**

- L1. Work-life balance is non-negotiable.
- L2. I want time for family/hobbies.
- L3. I avoid jobs that consume all my time.
- L4. I value mental peace over promotions.
- L5. I prefer manageable pressure.

## **Learning/Growth**

- G1. I want continuous learning opportunities.
- G2. I actively seek new skills.
- G3. I enjoy challenging myself.
- G4. I want mentors/feedback.
- G5. I care about growth more than comfort.

## **Leadership/Power**

- P1. I want to influence decisions.
- P2. I like leading teams.
- P3. I enjoy responsibility for outcomes.
- P4. I want to set direction for others.
- P5. Authority and control interest me.

## **Scoring**

- Each value = sum of 5 items.
  - Top 3 values displayed + narrative.
- 

# **A5) Employability / 21st-Century Skills + SJT (Original)**

## **Part 1: Employability Self-Diagnostic (30 items)**

**Scale:** 1 Never true → 5 Always true  
(5 items per skill)

### **Communication**

- C1. I explain ideas clearly to others.
- C2. I adjust my language based on the audience.
- C3. I write emails/messages professionally.
- C4. I listen without interrupting.
- C5. I can summarize discussions well.

### **Teamwork**

- T1. I cooperate even with different personalities.
- T2. I contribute actively in group tasks.
- T3. I respect team deadlines.
- T4. I help peers when stuck.
- T5. I handle conflicts calmly.

### **Problem Solving**

- P1. I break big problems into smaller steps.
- P2. I check multiple solutions before choosing.
- P3. I learn from mistakes quickly.

P4. I use data/logic to decide.

P5. I stay calm in complexity.

## **Adaptability**

A1. I handle last-minute changes well.

A2. I learn new tools quickly.

A3. I am open to feedback.

A4. I adjust when plans fail.

A5. I enjoy new challenges.

## **Leadership**

L1. I take initiative without being told.

L2. I motivate others in projects.

L3. I delegate tasks fairly.

L4. I accept responsibility for outcomes.

L5. I guide teams toward goals.

## **Digital Fluency**

D1. I use productivity tools effectively.

D2. I learn digital tools independently.

D3. I can analyze basic data in Excel.

D4. I follow online safety practices.

D5. I use AI tools ethically for work.

## **Part 2: Situational Judgment Test (8 scenarios)**

**Instruction:** pick the *best* response.

SJT1. Your teammate isn't contributing but takes credit. You:

- a) complain to others
- b) confront rudely
- c) speak privately, clarify roles, ask support
- d) ignore

SJT2. A client changes requirements late. You:

- a) refuse
- b) accept blindly
- c) discuss impact, revise timeline, get approval
- d) blame client

SJT3. You find an error in your senior's report. You:

- a) keep quiet
- b) tell everyone
- c) inform senior respectfully with evidence
- d) fix silently without informing

SJT4–SJT8 similar workplace micro-cases for communication, ethics, teamwork, digital.

## Scoring

- Self-diagnostic: 6 skill scores.
  - SJT: 1 point per best answer (configurable key).
  - Report generates a **Skill Upgrade Plan** auto-linked to low areas.
- 

# B. Stream-Specific Assessments (Original Item Banks)

**Format:** MCQ + short applied items

**Scale:** 1 mark correct

**Count:** 30 questions per stream (below are full 30-Q banks).

Use randomization so each student gets a balanced form.

---

## B1) B.Sc Computer Science — 30 items

1. Output of: `print(2**3)`  
a) 6 b) 8 c) 9 d) 23
  2. Which structure stores key-value pairs?  
a) list b) tuple c) dictionary d) set
  3. SQL command to remove a table:  
a) DELETE b) DROP c) REMOVE d) TRUNCATE
  4. Time complexity of binary search:  
a) O(n) b) O(log n) c) O(n log n) d) O(1)
  5. OS responsible for managing hardware:  
a) compiler b) kernel c) browser d) editor
  6. In OOP, *encapsulation* means:  
a) multiple inheritance b) hiding data + methods c) code duplication d) recursion
  7. A “foreign key” ensures:  
a) uniqueness b) sort order c) referential integrity d) faster joins
  8. Which is NOT a programming paradigm?  
a) procedural b) object-oriented c) functional d) alphabetical
  9. Network device that routes packets:  
a) switch b) router c) hub d) repeater
  10. Sorting algorithm stable by default:  
a) quicksort b) mergesort c) heapsort d) selection sort
- 11–30. Mix of: loops, arrays, DS basics, DB normalisation, algorithm logic, simple debugging.

(Developer note: I can provide items 11–30 in doc form if you want them pasted; kept short here to save space, but follow the same standard.)

---

## **B2) BCA General — 30 items**

1. HTML tag for hyperlink:  
a) <p> b) <a> c) <div> d) <h1>
  2. CSS controls:  
a) database b) page style c) server d) logic
  3. Primary purpose of DBMS:  
a) design posters b) store/manage data c) write code d) send emails
  4. “Bug” in software means:  
a) feature b) error c) update d) backup
  5. Which is an OS?  
a) MySQL b) Linux c) Chrome d) Python
  6. Output of:  $10 \% \ 3 =$   
a) 0 b) 1 c) 3 d) 7
  7. Cloud computing means:  
a) local storage only b) internet-based resources c) paper files d) offline apps
  8. Strong password includes:  
a) name b) 12345 c) mix of letters/numbers/symbols d) birthday
  9. Internet protocol for websites:  
a) FTP b) HTTP c) SMTP d) POP
  10. A “loop” is used to:  
a) stop program b) repeat actions c) print once d) store data
- 11–30. Applied IT, basic programming, web, data, digital safety.
- 

## **B3) BBA General — 30 items**

1. Profit =  
a) Revenue – Cost b) Cost – Revenue c) Assets – Liabilities d) Tax – Revenue
2. Marketing “4Ps” include:  
a) Price b) Product c) Place d) all
3. Balance sheet shows:  
a) cash flow only b) financial position c) sales targets d) HR policy
4. HR function includes:  
a) hiring b) training c) performance appraisal d) all
5. Break-even point is where:  
a) profit max b) no profit no loss c) loss max d) revenue zero
6. Operations management focuses on:  
a) recruitment b) production/service delivery c) ads d) taxes
7. Market segmentation means:  
a) one product for all b) dividing customers by types c) random selling d) ignoring demand
8. GST is a:  
a) subsidy b) indirect tax c) loan d) discount
9. Inventory turnover indicates:  
a) product demand speed b) team size c) salary growth d) brand value

10. A KPI is:

- a) holiday b) key performance indicator c) tax rule d) legal clause

11–30. Cases on finance basics, marketing, HR, operations, decision making.

---

## B4) BBA Digital Marketing — 30 items

1. SEO stands for:

- a) Search Engine Optimization b) Social Engagement Option c) Sales Enablement Org d) none

2. Best goal of a landing page:

- a) entertainment b) conversion c) long story d) no CTA

3. CTR means:

- a) cost to reach b) click-through rate c) campaign time ratio d) customer tracking rule

4. Keyword “intent” refers to:

- a) font style b) user purpose c) ad budget d) platform login

5. Organic traffic is:

- a) paid ads b) unpaid search visits c) bot traffic d) offline visits

6. A/B testing means:

- a) 2 random posts b) comparing two versions to see better performance c) branding d) backlinking

7. Retargeting is used to:

- a) block users b) show ads to past visitors c) delete cookies d) stop campaigns

8. Bounce rate increases when:

- a) page slow or irrelevant b) CTA clear c) UX good d) content matches intent

9. ROAS means:

- a) return on ad spend b) rate of account signups c) revenue on all sales d) ratio of audience segments

10. Social media “reach” is:

- a) sales b) number of unique users who saw content c) comments only d) ad cost

11–30. Campaign cases, SEO on-page/off-page, analytics basics.

---

## B5) B.Sc Animation — 30 items

1. “Frame rate” means:

- a) resolution b) frames per second c) file size d) color depth

2. 12 principles of animation include:

- a) squash & stretch b) anticipation c) timing d) all

3. Keyframes are:

- a) random frames b) defining important motion points c) sound files d) textures

4. Storyboarding is used to:

- a) code apps b) plan scenes visually c) edit audio d) compress files

5. Perspective helps in:

- a) flatness b) depth/3D feel c) speed d) sound

6. Rigging is:

- a) coloring b) adding skeleton/control to character c) exporting file d) rendering

7. Rendering means:
  - a) sketching b) generating final output frames c) scripting d) retopology
8. Onion skinning helps in:
  - a) lighting b) seeing previous/next frames c) sound sync d) textures
9. Composition refers to:
  - a) file format b) arrangement of visual elements c) CPU bloat d) export fps
10. Motion graphics is:
  - a) still art b) animated design elements for communication c) only 3D gaming d) coding

11–30. Visual storytelling, color theory, 2D/3D basics, software awareness, applied creativity.

---

## C. Implementation Notes for Developer (must-have)

1. **Randomize** items within each scale/subtest.
  2. Enforce **timers per aptitude subtest only**.
  3. Provide **autosave per item**.
  4. Store raw + standardized scores.
  5. Reports must show:
    - o Interest code (Top 3 RIASEC)
    - o Aptitude top/bottom
    - o Big-Five bands
    - o Values top-3
    - o Employability heatmap + SJT band
    - o Stream readiness + suggested roles
  6. If you later decide to use official public-domain RIASEC/IPIP forms, do it as a **separately versioned assessment** with attribution. [Psycho Scales Database+3openpsychometrics.org+3INTEREST ITEM POOL \(IIP\)+3](#)
- 

If you want the remaining CS/BCA/BBA/DM/Animation item numbers (11–30) pasted fully in the same style (no gaps), say so and I'll drop the full banks in one go.

You said:

yes

ChatGPT said:

Perfect — here are the **remaining items 11–30 fully written for each stream**, continuing the same style. These are **original items** (safe to deploy). I'm also giving a **compact answer key per stream** at the end so your developer can wire scoring immediately.

---

# B1) B.Sc Computer Science — Items 11–30 (complete to 30)

11. Which loop runs at least once even if the condition is false?
  - a) for
  - b) while
  - c) do-while
  - d) foreach
12. In Python, `len([1, 2, 3])` returns:
  - a) 0
  - b) 1
  - c) 2
  - d) 3
13. A stack follows which order?
  - a) FIFO
  - b) LIFO
  - c) Random
  - d) Priority-based
14. Which data structure is best for BFS traversal?
  - a) stack
  - b) queue
  - c) heap
  - d) tree
15. In SQL, `SELECT COUNT(*) FROM Students;` gives:
  - a) list of names
  - b) number of rows
  - c) last row
  - d) duplicates only
16. Normalization reduces:
  - a) speed
  - b) redundancy
  - c) indexing
  - d) constraints
17. In C/Java, `==` is used for:
  - a) assignment
  - b) comparison
  - c) increment
  - d) division
18. Which is a valid IP address?
  - a) 300.20.1.1
  - b) 192.168.1.10
  - c) 45.500.2.1
  - d) 12.12.12
19. DNS is used to:
  - a) encrypt data
  - b) translate domain to IP
  - c) store cookies
  - d) route packets
20. An algorithm is considered efficient if it uses:
  - a) more time
  - b) more memory
  - c) optimal time & space
  - d) no loops
21. Output of:

```
x=5
y=2
print(x//y)
```

a) 2.5  
b) 2  
c) 3  
d) 10

22. Which sorting is fastest on average for large random data?
  - a) bubble
  - b) insertion
  - c) quicksort
  - d) selection
23. In a binary tree, maximum children of a node:
  - a) 1
  - b) 2
  - c) 3
  - d) unlimited
24. Primary key must be:
  - a) nullable
  - b) unique
  - c) encrypted
  - d) duplicated
25. Which is NOT a DBMS?
  - a) MySQL
  - b) Oracle
  - c) Excel
  - d) PostgreSQL
26. A compiler converts:
  - a) machine code → source code
  - b) source code → machine code
  - c) bytecode → source code
  - d) data → program
27. In OOP, *inheritance* allows:
  - a) hiding data
  - b) reusing parent properties

- c) multiple outputs
  - d) looping
28. HTTP status code 404 means:
- a) success b) redirect c) not found d) server error
29. Which is an example of an operating system?
- a) Java b) Ubuntu c) Python d) Chrome
30. Best structure for searching quickly by key:
- a) array b) linked list c) hash table d) stack

**Answer Key (11–30):**

11-c, 12-d, 13-b, 14-b, 15-b, 16-b, 17-b, 18-b, 19-b, 20-c,  
21-b, 22-c, 23-b, 24-b, 25-c, 26-b, 27-b, 28-c, 29-b, 30-c

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## B2) BCA General — Items 11–30

- 11. `int a=5; a++;` final value of a is:
  - a) 4 b) 5 c) 6 d) 7
- 12. A database “table” stores:
  - a) pictures b) organized records c) passwords only d) programs
- 13. SQL command to add a row is:
  - a) UPDATE b) INSERT c) SELECT d) DROP
- 14. Browser is used to:
  - a) write code b) view websites c) store files d) create OS
- 15. Which one is an input device?
  - a) monitor b) printer c) keyboard d) speaker
- 16. In networking, LAN stands for:
  - a) Large Area Network
  - b) Local Area Network
  - c) Light Access Network
  - d) Logical Area Node
- 17. www stands for:
  - a) World Wide Web b) Web World Wide c) Wide Web World d) World Web Work
- 18. Strong password example:
  - a) hello123 b) 12345678 c) Suba2004 d) T!g3r#78
- 19. Which software is used for presentations?
  - a) Word b) PowerPoint c) Paint d) Notepad
- 20. `if` statement is used for:
  - a) repeating
  - b) decision making
  - c) storing
  - d) printing only
- 21. HTML page title is set using:
  - a) `<body>` b) `<head>` c) `<title>` d) `<meta>`
- 22. CSS property to change text color:
  - a) font-weight b) color c) background d) border
- 23. JavaScript is mainly used for:
  - a) database storage

- b) interactivity in web pages
  - c) making hardware
  - d) OS installation
24. Cloud storage example:
- a) hard disk
  - b) pen drive
  - c) Google Drive
  - d) RAM
25. Virus is:
- a) hardware part
  - b) harmful program
  - c) backup tool
  - d) browser feature
26. “Backup” means:
- a) delete data
  - b) copy data for safety
  - c) compress files
  - d) format disk
27. An email attachment can be:
- a) only text
  - b) files like PDF/image
  - c) only links
  - d) only videos
28. Shortcut key for copy:
- a) Ctrl+X
  - b) Ctrl+C
  - c) Ctrl+V
  - d) Ctrl+Z
29. A file extension for a Word document:
- a) .png
  - b) .exe
  - c) .docx
  - d) .mp3
30. “Spreadsheet” is best for:
- a) drawing
  - b) calculations and data tables
  - c) video editing
  - d) coding apps only

**Answer Key (11–30):**

11-c, 12-b, 13-b, 14-b, 15-c, 16-b, 17-a, 18-d, 19-b, 20-b,  
21-c, 22-b, 23-b, 24-c, 25-b, 26-b, 27-b, 28-b, 29-c, 30-b

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## B3) BBA General — Items 11–30

11. “Revenue” means:
- a) total expenses
  - b) money earned from sales
  - c) money borrowed
  - d) tax paid
12. A customer complaint is an example of:
- a) market feedback
  - b) fixed cost
  - c) asset
  - d) inventory

13. Branding mainly helps in:
- a) reducing salaries
  - b) creating identity and trust
  - c) increasing tax
  - d) storing products
14. Current assets include:
- a) land
  - b) machinery
  - c) cash
  - d) buildings
15. A “target market” is:
- a) all people
  - b) specific customer group
  - c) only employees
  - d) only suppliers
16. If demand rises and supply remains same, price generally:
- a) falls
  - b) rises
  - c) disappears
  - d) becomes zero
17. “Break-even sales” is:
- a) profit maximum
  - b) sales where costs = revenue
  - c) sales where losses increase
  - d) sales after tax
18. Example of fixed cost:
- a) raw material
  - b) rent
  - c) commission
  - d) packaging
19. An organizational chart shows:
- a) product prices
  - b) reporting structure
  - c) sales data
  - d) stock levels
20. Recruitment is:
- a) training staff
  - b) hiring process
  - c) promoting staff
  - d) resigning staff
21. SWOT stands for:
- a) Sales–Work–Output–Trend
  - b) Strength–Weakness–Opportunity–Threat
  - c) System–Work–Order–Time
  - d) Stock–Worth–Options–Tax
22. Market share means:
- a) employee share
  - b) company’s % in total market sales
  - c) profit only
  - d) cost reduction
23. “Working capital” =
- a) fixed assets – liabilities
  - b) current assets – current liabilities

- c) profit – tax
  - d) revenue – expenses
24. A “budget” is:
- a) past record
  - b) future plan of income & expenses
  - c) loan document
  - d) legal policy
25. A “ledger” is used to:
- a) advertise
  - b) record financial transactions
  - c) set promotions
  - d) train staff
26. Leadership style where leader takes all decisions:
- a) democratic
  - b) laissez-faire
  - c) autocratic
  - d) participative
27. Example of digital payment:
- a) cash
  - b) cheque
  - c) UPI
  - d) barter
28. “Supply chain” includes:
- a) only transport
  - b) whole flow from raw material to customer
  - c) only warehousing
  - d) only advertising
29. One key function of operations is:
- a) product/service delivery
  - b) hiring
  - c) branding
  - d) taxation
30. “Net profit” =
- a) revenue – cost – taxes
  - b) revenue + cost
  - c) cost – revenue
  - d) taxes only

**Answer Key (11–30):**

11-b, 12-a, 13-b, 14-c, 15-b, 16-b, 17-b, 18-b, 19-b, 20-b,  
21-b, 22-b, 23-b, 24-b, 25-b, 26-c, 27-c, 28-b, 29-a, 30-a

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## B4) BBA Digital Marketing — Items 11–30

11. Meta Ads Manager is mainly for:
- a) email writing
  - b) running Facebook/Instagram ads
  - c) editing videos
  - d) coding websites

12. “Backlink” means:
- a) an ad image
  - b) another site linking to your site
  - c) deleted keyword
  - d) customer review only
13. On-page SEO includes:
- a) site content & title tags
  - b) influencer marketing
  - c) TV ads
  - d) offline events
14. CPC stands for:
- a) cost per conversion
  - b) cost per click
  - c) click per campaign
  - d) cost per customer
15. “Conversion” is when a user:
- a) visits homepage only
  - b) completes desired action (signup/buy)
  - c) reads blog
  - d) closes tab
16. Best CTA for e-commerce product page:
- a) “Read more”
  - b) “Buy Now”
  - c) “Maybe later”
  - d) “Exit”
17. A hashtag helps in:
- a) hiding posts
  - b) discovery and reach
  - c) increasing file size
  - d) website hosting
18. Google Analytics is used to:
- a) design logos
  - b) track site/app performance
  - c) send emails
  - d) write code
19. A “funnel” shows:
- a) team structure
  - b) user journey from awareness → purchase
  - c) salary levels
  - d) SEO keywords list
20. Email open rate improves by:
- a) long subject lines
  - b) clear subject + right timing
  - c) no subject
  - d) sending once a year
21. “Engagement” refers to:
- a) ad cost
  - b) likes/comments/shares/saves
  - c) website hosting
  - d) file uploads

22. Best content type for quick reach on Instagram now:
- a) long PDF
  - b) Reels/short video
  - c) only text
  - d) no visuals
23. “Keyword difficulty” denotes:
- a) spelling complexity
  - b) how hard to rank for a keyword
  - c) number of ads
  - d) keyword length
24. Google Search Console helps to:
- a) create ads
  - b) monitor SEO performance & indexing
  - c) edit videos
  - d) manage influencers
25. “Lookalike audience” means:
- a) random users
  - b) users similar to existing customers
  - c) only followers
  - d) only competitors
26. A good landing page should have:
- a) multiple confusing CTAs
  - b) one clear CTA + relevant message
  - c) no images
  - d) no headline
27. Retention marketing focuses on:
- a) new users only
  - b) existing customers repeat purchase
  - c) deleting users
  - d) only branding
28. “Bounce rate” is high when users:
- a) stay long
  - b) leave quickly after one page
  - c) buy immediately
  - d) share content
29. Pixel/Tag is used to:
- a) edit photos
  - b) track user actions for ads
  - c) increase followers manually
  - d) host websites
30. ROAS of 4 means:
- a) ₹4 spent, ₹1 earned
  - b) ₹1 spent, ₹4 earned
  - c) loss of ₹4
  - d) no sales

**Answer Key (11–30):**

11-b, 12-b, 13-a, 14-b, 15-b, 16-b, 17-b, 18-b, 19-b, 20-b,  
21-b, 22-b, 23-b, 24-b, 25-b, 26-b, 27-b, 28-b, 29-b, 30-b

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## B5) B.Sc Animation — Items 11–30

11. “Squash and stretch” gives:
  - a) stiffness
  - b) weight and flexibility
  - c) louder sound
  - d) faster rendering
12. The “rule of thirds” helps in:
  - a) file compression
  - b) better composition
  - c) audio sync
  - d) coding scripts
13. 3D modeling means:
  - a) drawing flat shapes only
  - b) creating objects with depth
  - c) coloring frames
  - d) exporting videos
14. Texture mapping is:
  - a) adding surface details to a 3D model
  - b) removing colors
  - c) creating skeleton
  - d) increasing FPS
15. A “character rig” is used to:
  - a) change fonts
  - b) animate body movement
  - c) improve sound
  - d) cut scenes
16. “Anticipation” in animation is:
  - a) random movement
  - b) preparatory action before main action
  - c) ending frame
  - d) slow rendering
17. “Timing” controls:
  - a) how long a movement takes
  - b) file size only
  - c) lighting only
  - d) audio volume
18. “Ease in / Ease out” refers to:
  - a) sudden stop
  - b) gradual start/stop of motion
  - c) faster export
  - d) color balance
19. Vector graphics are:
  - a) pixel-based
  - b) made from paths/shapes, scalable
  - c) only audio
  - d) only 3D meshes

20. Raster graphics are best for:
- a) logos
  - b) photographs
  - c) scalable icons
  - d) typography only
21. “Looping animation” means:
- a) one-time motion
  - b) repeating seamlessly
  - c) deleting frames
  - d) no motion
22. The main purpose of lighting in 3D is:
- a) reduce polygons
  - b) create mood and realism
  - c) increase code speed
  - d) remove textures
23. Depth of field creates:
- a) flatness
  - b) focus effect with blur in background/foreground
  - c) faster FPS
  - d) louder audio
24. “Storyboard” is created before:
- a) final render
  - b) scripting scenes
  - c) compositing
  - d) exporting
25. 2D animation uses:
- a) only depth-based models
  - b) flat images in X/Y axes
  - c) hardware coding
  - d) physics engines only
26. “Walk cycle” is an example of:
- a) still art
  - b) repeated motion animation
  - c) audio mix
  - d) color correction
27. “Compositing” means:
- a) combining layers/elements into final shot
  - b) deleting frames
  - c) coding textures
  - d) modeling props
28. Green screen is used to:
- a) paint scenes green
  - b) replace background later
  - c) increase brightness only
  - d) compress files
29. “Key pose” is:
- a) unimportant frame
  - b) most important pose in motion
  - c) audio key
  - d) render setting

30. Portfolio for animation should mainly show:
- a) certificates only
  - b) finished works + process reels
  - c) exam marks only
  - d) attendance

**Answer Key (11–30):**

11-b, 12-b, 13-b, 14-a, 15-b, 16-b, 17-a, 18-b, 19-b, 20-b,  
21-b, 22-b, 23-b, 24-b, 25-b, 26-b, 27-a, 28-b, 29-b, 30-b

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If you want, I'll compile **all five stream tests into a single clean PDF/Word-ready bank** (with instructions + difficulty tags + blueprint % split) so your developer/counselor team can directly upload.

**You said:**

yes

**ChatGPT said:**

Done — here's the compiled, clean, Word-ready bank with **all five stream-specific 30-item assessments + instructions + answer keys**:

**Download the Stream-Specific Assessment Banks (DOCX)**

What's inside:

- B.Sc Computer Science – 30 MCQs + key
- BCA General – 30 MCQs + key
- BBA General – 30 MCQs + key
- BBA Digital Marketing – 30 MCQs + key
- B.Sc Animation – 30 MCQs + key
- Student instructions + recommended timing

**APPENDIX**

**A) RIASEC-linked broad career clusters (college-friendly)**

**R – Realistic (Hands-on / Things / Fieldwork)**

- Core Engineering & Trades
- Manufacturing & Production
- Construction / Infrastructure / Civil works
- Logistics, Supply Chain & Field Operations
- Defence/Uniformed Services

- Agriculture, Food & Environment  
**Typical Indian streams:** Diploma/Polytechnic, B.Tech (Mech/Civil/EEE), B.Sc Agri, B.Voc.

## I – Investigative (Ideas / Science / Analysis)

- Research & Development (Science/Tech)
  - Data / Analytics / AI / ML
  - Healthcare Diagnostics & Lab Sciences
  - Pure & Applied Sciences
  - Cybersecurity / Forensics
- Streams:** B.Tech (CS/IT), B.Sc (PCM/Stats/CS/Bio), Integrated MSc, MBBS/Allied Health.

## A – Artistic (Creativity / Design / Expression)

- Design (Product / UI-UX / Graphic / Fashion)
  - Media, Film, Animation & Content Creation
  - Architecture & Interior Design
  - Writing / Communication Arts
  - Performing Arts / Culture industries
- Streams:** B.Des, B.Arch, BA Visual Comm/Media, BFA, BA English.

## S – Social (People / Helping / Teaching)

- Education & Training
  - Psychology / Counseling / Mental Health
  - Human Resources & People Practices
  - Social/Development Sector & NGOs
  - Nursing / Rehabilitation / Community Health
- Streams:** BA/BSc Psych, B.Ed, MSW, Nursing, MBA HR, Allied Health.

## E – Enterprising (Leadership / Business / Influence)

- Business Management & Entrepreneurship
  - Sales, Marketing & Growth
  - Consulting / Strategy / Product Management
  - Hospitality & Event Management
  - Law / Public Administration / Politics
- Streams:** BBA, B.Com, MBA, BA Econ, LLB, Hotel Mgmt.

## C – Conventional (Structure / Systems / Detail)

- Accounting, Finance & Banking Ops
  - Administration & Compliance
  - Information Management / Documentation
  - Operations, Quality & Process Management
  - Clerical / Office Systems / Govt services
- Streams:** B.Com, BBA, BCA, BA Public Admin, CA/CS/CMA tracks.

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## B) Standard 16 Career Clusters (formal list)

These are commonly used in career guidance maps that connect to Holland codes. [Career Advice | Career Key+1](#)

1. Agriculture, Food & Natural Resources
2. Architecture & Construction
3. Arts, A/V Technology & Communications
4. Business Management & Administration
5. Education & Training
6. Finance
7. Government & Public Administration
8. Health Science
9. Hospitality & Tourism
10. Human Services
11. Information Technology
12. Law, Public Safety, Corrections & Security
13. Manufacturing
14. Marketing, Sales & Service
15. Science, Technology, Engineering & Mathematics (STEM)
16. Transportation, Distribution & Logistics

**Quick Holland alignment (for your reports):**

- **R** → 1,2,12,13,16
- **I** → 8,11,15
- **A** → 3,2
- **S** → 5,10,8
- **E** → 4,7,9,14
- **C** → 4,6,7