

(20)

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(b) ₹ 13, ₹ 17

(c) ₹ 15, ₹ 14

(d) ₹ 17, ₹ 13

50. 400 students took a mock test : 60% of the boys and 80% of the girls cleared the cut-off in the test. If the total percentage of students clearing the cut-off is 65%, then how many girls are appeared in the test ?

(a) 100

(b) 120

(c) 150

(d) 300

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1,660

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Roll No. ....

**XCS-400/401(A)**

**B. TECH. (FOURTH SEMESTER)**

**MID SEMESTER**

**EXAMINATION, April, 2023**

**(All Branches)**

**CAREER SKILLS**

**Time : 1½ Hours**

**Maximum Marks : 50**

**Instructions for students :**

- (i) This question paper consists of 50 questions.
- (ii) All questions are compulsory.
- (iii) Each question carries equal marks.
- (iv) Use of a calculator is not allowed.
- (v) There is no negative marking.
- (vi) It is compulsory to mention the SET in the OMR.

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**SET-A**

**Directions (Q. Nos. 1-5) :** In each of the question given below, select the appropriate choice from the options provided.

1. Safe : Secure :: Protect : ?
  - (a) Lock
  - (b) Sure
  - (c) Guard
  - (d) Conserve
2. Microphone : Loud :: Microscope : ?
  - (a) Elongate
  - (b) Investigate
  - (c) Magnify
  - (d) Examine
3. Fear : Threat :: Anger : ?
  - (a) Compulsion
  - (b) Panic
  - (c) Provocation
  - (d) Force

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4. Produce : Waste :: Contrast : ?
  - (a) Match
  - (b) Correct
  - (c) Oppose
  - (d) Contradict
5. Match : Victory :: Examination : ?
  - (a) Write
  - (b) Appear
  - (c) Success
  - (d) Attempt

**Directions (Q. Nos. 6-10) :** From the choices given below, choose an appropriate option to solve the analogies.

6. (a) Sardar Patel Stadium : Ahmedabad
  - (b) Eden Garden : Kolkata
  - (c) Jawaharlal Nehru Stadium : New Delhi
  - (d) M. Chinnaswamy Stadium : Chennai
7. (a) Algophobia : phobia of pain
  - (b) Bibliophobia : phobia of books
  - (c) Chronophobia : fear of time
  - (d) Hematophobia : fear of water

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8. Painter : Painting :: Architect : \_\_\_\_\_

- (a) Embroidery
- (b) Statue
- (c) Building
- (d) Sculptor

9. Engineering : Engineer :: MBBS : \_\_\_\_\_

- (a) Doctor
- (b) Lawyer
- (c) Teacher
- (d) Actor

10. (a) National Anthem : Jana Gana Mana

- (b) National Tree : Indian Neem
- (c) National Calendar : Saka Calendar
- (d) National Bird : Peacock

**Directions (Q. Nos. 11–20) :** Read the passage given below and answer the questions based on it. Have you ever failed at something so miserably that the thought of attempting to do it again was the last thing on your mind ? If your answer is yes,

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then you should understand that you are not a robot. Unlike robots, we human beings have feelings, emotions, and dreams. We are all meant to grow despite our circumstances and limitations.

Flourishing and trying to make our dreams come true feels great when life goes our way. But what happens when it does not ? What happens when you fail despite all your hard work ? Do you stay down and accept defeat or do you get up again ? If you tend to persevere and keep going, you have what experts call 'grit'. Falling down or failing is one of the most agonising, embarrassing, and scary human experiences. But it is also one of the most educational, empowering, and essential parts of living a successful and fulfilling life. Did you know that perseverance (grit) is one of the seven qualities that has been described as the key to personal success and betterment in society ? The other six are curiosity, gratitude, optimism, self-control, social intelligence, and zest. Thomas

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Edison is an example of grit for trying more than 1,000 times to invent the light bulb. If you are reading this with the lights on in your room, you will realise the importance of his success. When asked why he kept going despite hundreds of failures, he merely stated that they had not been failures, they were hundreds of attempts toward creating the light bulb. This statement not only revealed his grit but also his optimism for looking at the bright side. Grit can be learnt to help you become more successful. One of the techniques that help is mindfulness. Mindfulness is a practice that makes an individual stay in the moment by bringing awareness of his or her experience without judgement. This practice has been used to quieten the noise of fears and doubts. Through this simple practice of mindfulness, individuals have the ability to stop the self-sabotaging downward spiral of hopelessness, despair, and frustration. What did you do to overcome the negative and

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self-sabotaging feelings of failure ? Reflect on what you did, and try to use those same powerful resources to help you today.

11. The reason why you are not a robot is that :

- (a) You fail miserably at tasks
- (b) Failure and success can affect your emotions
- (c) You work hard
- (d) You have limitations

12. Choose the option that best captures the central idea of the passage from the given quotes :

- (a) "Mistakes are the portals of discovery."
- (b) "Failure should be our teacher, not our undertaker. Failure is delay not defeat."
- (c) "A person who never made a mistake never tried anything new."
- (d) "Failure is a temporary detour, not a dead end."

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13. What is the tone of the following context :  
"Falling down or failing is one of the most  
....., educational, empowering, and  
essential parts of living a successful and  
fulfilling life" ?
- (a) Humorous
  - (b) Optimistic
  - (c) Horrifying
  - (d) Solemn
14. Which of the following is relevant for the title  
of the passage ?
- (a) Dreams Always Come True
  - (b) Failure and Grit Go Hand in Hand
  - (c) Humans vs. Robots
  - (d) Falling Down and Getting Up
15. \_\_\_\_\_ was created after many attempts.
- (a) Electricity
  - (b) Light bulb
  - (c) Current
  - (d) Tube light

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16. Which of the following sentences makes the  
correct use of "grit", as used in the passage ?
- (a) Get rid of that grit in your shoes.
  - (b) She had a bit of grit in her eye.
  - (c) The road had been covered with grit.
  - (d) Her grit never made her give up.
17. To develop perseverance one must :
- (a) become more aware.
  - (b) work hard.
  - (c) be in the moment and be aware without  
judgement.
  - (d) seek guidance.
18. How does mindfulness help ?
- (a) It creates awareness.
  - (b) It quietens the noise of fears and doubts.
  - (c) It helps one become successful.
  - (d) It helps develop focus.
19. What do you understand from this line,  
"Falling down or failing is one of the most

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agonising, embarrassing, and scary human experiences" ?

- (a) Falling down makes us angry.
- (b) Failure can deeply affect our emotions.
- (c) Stay positive and be optimistic.
- (d) Self-control is empowering.

20. Choose the option that correctly states the meaning of 'social intelligence' as implied in the passage :

- (a) Knowing others
- (b) Knowing oneself and others
- (c) Knowing oneself
- (d) Knowing one's surroundings

**Directions (Q. Nos. 21-25) :** Pick the odd one out from the following words :

21. (a) Tedious
- (b) Lively
  - (c) Tiring
  - (d) Monotonous

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22. (a) Generous
- (b) Unselfish
  - (c) Hospitable
  - (d) Miserly

23. (a) Juvenile
- (b) Yong
  - (c) Experienced
  - (d) Tender

24. (a) Impediment
- (b) Hurdle
  - (c) Hindrance
  - (d) Aid

25. (a) Dollar
- (b) Peso
  - (c) Ounce
  - (d) Euro

**Directions (Question Nos. 26-33) :** In each of the following questions, a question stem is followed by two different statements. You need to decide

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whether the statements given are sufficient to answer the question asked. Mark your answer option as :

- (a) If the question can be answered by using any one of the statements alone, but not by the other alone.
- (b) If the question can be answered by using either of the two statements alone.
- (c) If the question can be answered by using the two statements together.
- (d) If the question cannot be answered by using the given statement.

26. Who is paternal uncle of P ?

**Statement I :** P is brother of L, who is daughter of Q, who is sister of N, who is brother of S.

**Statement II :** M is brother of K, who is husband of L, who is mother of G, who is sister of P.

27. Who amongst P, Q, R, S, T and U is the tallest ?

**Statement I :** P is taller than R and T but not as tall as U, who is taller than Q and S.

**Statement II :** R is third in height in ascending order and not as tall as U, P and Q, Q being taller than P but not the tallest.

28. Do X, Y and Z stand in a straight line ?

**Statement I :** F is 2 km towards the south of E. K is 5 km towards the west of F. X is 2 km towards the north of F. Y is 3 km towards the east of E and Z is 4 km towards the east of Y.

**Statement II :** X is 2 km towards the north of L. K is 4 km towards the west of L. S is 1 km towards the south of K. M is 2 km towards the west of S. Y is 3 km towards the north of M and Z is 2 km towards the north of W.

29. Who sits third to the left of A if all persons sit in a row and facing South direction ?

**Statement I :** Seven persons sitting in a row. B sits exactly in the middle of the row. Two persons sit between B and D.

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**Statement II :** C sits to the immediate left of B. Only one person sits between C and E. F sits third to the left of E. G sits fourth to the left of E.

30. Seven boxes A, B, C, D, E, F and G are kept one above the other like a stack. The bottommost is numbered 1 and the topmost box is numbered 7. Which box is kept immediately above A ?

**Statement I :** E is two boxes above A, which is three boxes above C. F is immediately above D.

**Statement II :** C is not above G. B is at least three boxes above F.

31. Is variable 'X' greater than variable 'Y' ?

**Statement I :** The value of X is  $\frac{1}{2}$  of Y.

**Statement II :** The value of Y is 175% more than that of X.

32. Which direction is Preeti facing ?

**Statement I :** If Gagan, who is currently facing east, turns 90 degree towards his right, he would face a direction exactly opposite to the direction Preeti is facing.

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**Statement II :** If Priya, who is currently facing south, turns left, walks 1 km and then takes a left turn again, she would face the same direction as Preeti.

33. What is the value of X ?

**Statement I :**  $X^3 = 8$

**Statement II :**  $X^2 = 4$

34. Between 4 o'clock and 5 o'clock in the morning, at what time will the hands of a wall clock be in straight line but not overlapping each other ?

- (a) 60 (5/11) minutes past 4
- (b) 45 (5/11) minutes past 4
- (c) 54 (4/11) minutes past 4
- (d) 4 (4/11) minutes past 4

35. By how many degrees will the hour hand move, if the second hand moves 3600 times ?

- (a)  $360^\circ$
- (b)  $25^\circ$
- (c)  $30^\circ$
- (d)  $45^\circ$



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36. After how much time do the two hands of a correct clock coincide ?

- (a)  $(65+5/11)$
- (b)  $(56+5/11)$
- (c) 60 min.
- (d) None of these

37. At what time between 4 p.m. and 5 p.m. will the two hands be apart by 5 mins. ?

- (a) 16 and  $4/11$  min. past 4 p.m.
- (b) 27 and  $3/11$  min. past 4 p.m.
- (c) Both (a) and (b)
- (d) None of these

38. The two hands of an incorrect clock coincide after every 70 min. How much does the clock gain or lose per hour ?

- (a) 0.064 min.
- (b) 3.896 min.
- (c) 5 min.
- (d) None of these

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39. If 11th August, 2011 was a Sunday, what will be the day on 11th August, 2021 ?

- (a) Thursday
- (b) Saturday
- (c) Friday
- (d) Sunday

40. Last day of the century cannot be a :

- (a) Monday
- (b) Wednesday
- (c) Tuesday
- (d) Friday

41. What was the day on the week on 28th May, 2006 ?

- (a) Thursday
- (b) Friday
- (c) Saturday
- (d) Sunday

42. The members of a club have a meeting on every Wednesday. What is the maximum number of meeting that they can have in a year from January to December ?

- (a) 53
- (b) 51
- (c) 52
- (d) Cannot be determined

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43. How many Sundays will be there in the month of February 2006 ?

- (a) 3
- (b) 4
- (c) 5
- (d) None of these

**Directions (Q. Nos. 44–47) :** A cube of side 4 cm is taken and painted such that 2 opposite sides are painted Red, 2 opposite sides are painted Green and 2 opposite sides are painted Blue. It is now cut into 64 small Cubes.

44. How many of the small cubes will have no face painted ?

- (a) 6
- (b) 8
- (c) 12
- (d) 16

45. How many small cubes will have at most 3 faces painted ?

- (a) 10
- (b) 32
- (c) 8
- (d) 64

46. How many small cubes will have 2 faces painted ?

- (a) 12
- (b) 16
- (c) 20
- (d) 24

47. How many of the small cubes have at least 2 faces painted ?

- (a) 24
- (b) 36
- (c) 32
- (d) 40

48. A large cube has been divided into 120 small cuboids. Find the minimum number of cuts that can be applied here in the process :

- (a) 10
- (b) 11
- (c) 12
- (d) 15

49. Two bus tickets from city A to B and three tickets from city A to C cost ₹ 77 but three tickets from city A to B and two tickets from city A to C cost ₹ 73. What are the fares for cities B and C from A ?

- (a) ₹ 4, ₹ 23