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XCS-400

B. Tech. (Fourth Semester)
Mid Semester EXAMINATION, 2014

(Common for CS/IT/EC/ME/CE/EN)

CAREER SKILLS

Time : Two Hours]

[Maximum Marks : 60]

Note : (i) This question paper contains two Sections : Section A and Section B.

(ii) Answer all questions in Section A by choosing the correct option from multiple choices. Each question carries 2 marks.

(iii) Answer any four questions from Section B. Each question carries 12 marks.

Section—A

2 each

1. Attempt all multiple choice questions, choosing the correct option.

(i) Pointing to the photograph of a lady, a man said, "She is the wife of the Father-in-law of my wife". How is the man related to the lady in the photograph?

 - (a) Son
 - (b) 'Grandson
 - (c) Brother
 - (d) None of these

- (ii) A is the father of B's sister C. D is the daughter of B's wife and E is the son of C. How is D related to E ?
 (a) Cousin
 (b) Sibling
 (c) Sister
 (d) Cannot be determined
- (iii) 8 people are sitting around a circular table all facing inwards. A is directly opposite H while G is 2nd to the right of H. While B is sitting between H and G, E is sitting between A and G. If A is facing the South direction, then which direction is G facing ?
 (a) South-West
 (b) West
 (c) North
 (d) East
- (iv) A is fairer than B but not as fair as D. D is darker than C who in turn is darker than F. If F is fairer than E, then who among them is the fairest ?
 (a) E
 (b) C
 (c) F
 (d) D
- (v) If "ale tu bin" means drink more water, "tu ni koh" means grow more trees and "koh hum ne" means tree are good, then which word in the language represents grow ?
 (a) koh
 (b) ni
 (c) tu
 (d) Cannot be determined

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- (vi) If TEACHER is coded as UGDGMKY in a particular language, how will STUDENT be coded in the same language ?
- TVXHITA
 - TVXHJTA
 - VTXHJTA
 - VTHXJTA

Section—B

Note : Attempt any *four* out of six questions in Section B. Each question carries 12 marks.

Important Note :

1. A question set in Section B may have subparts. Write the question number clearly before you answer the sub parts.
2. You need to show the working of the question before you answer it. Only writing the answer option will not get you marks.
2. (a) A teacher had arranged for extra classes for his students in a particular week. 5 topics were to be taught on 5 different days of the week starting from Monday to Saturday with a Rest day in between. The topics were Logarithms, Set Theory, Percentages, Clocks and Calendar not in any particular order.

Additional information is as follows :

- (1) The Rest day will be either on Wednesday or Thursday.
- (2) Percentages will be the 1st topic taught and will not be immediately followed by Set Theory.

- (3) Clocks and Calendar will have to be taught on consecutive days.
- (4) Logarithms will be taught on Saturday.
- (i) When is the class on Set Theory scheduled ?
- (a) Wednesday
 - (b) Friday
 - (c) Tuesday
 - (d) Cannot be determined
- (ii) Which topic is scheduled on Wednesday ?
- (a) Clocks
 - (b) Set Theory
 - (c) Calendar
 - (d) Cannot be determined
- (iii) If there is gap of exactly 1 day between the Rest day and the day Clocks topic is scheduled, then how many days gap is there between Calendar and Logarithms ?
- (a) 2
 - (b) 3
 - (c) 1
 - (d) Cannot be determined
- (b) 6 new ministers were being sworn in as a part of the government. The six ministers were PC, PM, MB, AKA, KS, and SBC and were being sworn in as The Ministers of Finance, Defence, Home, Civil Aviation, Telcom and Railways not in any order.
Further conditions are as under :
- (1) The first person to be sworn in was the Defence Minister.

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- (2) AKA and KS were sworn immediately after one another though not necessarily in the same order.
- (3) There were exactly 2 people sworn in between MB and SBC.
- (4) PC was sworn in last and got civil aviation.
- (5) The Minister for Finance was sworn in 3rd and was immediately followed by the Railway Minister.
- (6) Neither SBC nor MB got the Defence Ministry.
- (7) AKA was sworn in as the Railway Minister and took oath after the Telecom Minister.
- (i) Who was the person to take oath as the Home Minister ?
- (a) MB
 - (b) PM
 - (c) SBC
 - (d) Cannot be determined
- (ii) At which position did the Telecom Minister take oath ?
- (a) 2nd
 - (b) 3rd
 - (c) 4th
 - (d) 1st
- (iii) Which person took oath as the Finance Minister ?
- (a) AKA
 - (b) MB
 - (c) KS
 - (d) Cannot be determined

3. (a) 8 people of the BCCI governing council were seated around a circular table for their annual meeting. The members of the governing council were the President, the Vice-President, Secretary, Treasurer, Member, Captain, Vice Captain and Coach of the team. Further information is as under :

- (1) The Member was diagonally opposite the Vice-Captain and 2nd to the left of the President.
- (2) The Secretary was seated to the immediate left of the Member.
- (3) Neither the Captain nor the Coach was seated adjacent to the Vice-Captain.
- (4) The Vice-President was diagonally opposite the Coach.
 - (i) Who was sitting diagonally opposite the President ?
 - (a) Vice-Captain
 - (b) Treasurer
 - (c) Captain
 - (d) Coach
 - (ii) Taking into consideration all the conditions, how many different arrangements are possible ?
 - (a) 1
 - (b) 2
 - (c) 3
 - (d) 4

- (iii) Counting in the anticlockwise direction, how many people are seated between the Secretary and the Vice-Captain ?
- (a) 2
 - (b) 3
 - (c) 4
 - (d) Cannot be determined
- (b) 4 boys Alok, Amit, Atul and Ashish and 4 girls Anu, Anita, Astha and Ankita are sitting on opposite sides of a rectangular table, 4 on each side. Further information is as follows :
- (1) Alok is 2nd to the right of Ankita and opposite to Ashish.
 - (2) Astha is sitting at one of the corners and does not have a girl opposite to her.
 - (3) Atul and Anita occupy adjacent positions.
 - (4) There are 2 people between Astha and Ashish.
- (i) Who is sitting opposite Ankita ?
- (a) Atul
 - (b) Anita
 - (c) Alok
 - (d) Cannot be determined
- (ii) How many of the mentioned persons definitely have 2 people of the opposite gender as their neighbours ?
- (a) 1
 - (b) 2
 - (c) 3
 - (d) 4

(iii) Which person is sitting opposite Amit ? (ii)

- (a) Astha
- (b) Alok
- (c) Atul
- (d) Anita

4. (a) Sanjay was at the New Delhi station waiting to take a Metro Train. There were 5 Trains scheduled in the next 50 minutes each one on a different line and going to a different destination. The destinations were Airport, ISBT, Rohini, Dwarka and Badarpur not in any particular order. Also, they were on The Red, Blue, Yellow, Silver and Black lines not in any particular order :

- (1) The destination of the first train is Dwarka, and the Yellow line will be the last train to arrive.
- (2) Trains going to Airport and ISBT will arrive immediately one after the other not in any order. (b)
- (3) The Blue line will be going to Rohini and the Yellow line to the Airport.
- (4) The Red line is not the first Train to arrive. Also, its destination is not ISBT.
- (i) Which Metro line is scheduled to go to Badarpur ?
 - (a) Yellow
 - (b) Silver
 - (c) Red
 - (d) Black

- (ii) If the Red Metro line train is scheduled immediately before the Silver Metro line train, then what will be the destination of the Black Metro line train ?
- (a) Dwarka
 - (b) ISBT
 - (c) Airport
 - (d) Badarpur
- (iii) Which 2 Metro line trains cannot be scheduled to depart immediately one after the other ?
- (a) Dwarka and Badarpur
 - (b) Blue and Silver
 - (c) ISBT and Dwarka
 - (d) Red and Black
- (b) Mr. Sharma took his 5 children to a party one evening. Each child selected a snack and a cold drink. The Snacks were Burger, Hot Dog, Pizza, Patties and Sandwich and the cold drinks were Cepsi, Poke, Liranda, Mimca and Up-7. Further conditions were as follows :
- (1) While Burger, Hot Dog and Pizza are classified under Chilly snacks, Patties and Sandwich are non-Chilly snacks.
 - (2) Reyu had Mimca and a Chilly snack.
 - (3) Person who had Cepsi choose a non-chilly snack.
 - (4) Itisha's snack was not in the same category as Utkarsh.

- (5) Aditya had a Sandwidth. (2) C
- (6) No 2 children choose the same snack or cold drink. (3) E
- (7) Farhan choose Hot Dog and Up-7. (i) F
- (8) The kid who choose Patties did not choose Cepsi.
- (9) Utkarsh choose Poke which does not go well with a non-chilly snack.
- (i) What was the Snack choosen by Reyu ? (ii)
- (a) Burger
 - (b) Patties
 - (c) Hot Dog
 - (d) Cannot be determined
- (ii) Which child choose Liranda ? (iii)
- (a) Itisha
 - (b) Reyu
 - (c) Utkarsh
 - (d) Farhan
- (iii) Which other child(ren) choose the Snack from the same category as Farhan ? (0)
- (a) Itisha, Utkarsh
 - (b) Reyu
 - (c) Aditya, Reyu
 - (d) Reyu, Utkarsh
5. (a) There are 6 people A, B, C, D, E and F in a family. There are 2 married couples. Further information is an follows :
- (1) A is the grandson of D and the brother of F.

- (2) C is the daughter-in-law of E.
 (3) E is the grandfather of F.
 (i) How is E related to C ?
 (a) Father
 (b) Father-in-law
 (c) Uncle
 (d) Cannot be determined
 (ii) How many male members are there in the family ?
 (a) 2
 (b) 3
 (c) 4
 (d) Cannot be determined
 (iii) How is B related to F ?
 (a) Father
 (b) Uncle
 (c) Grandfather
 (d) Cannot be determined
 (b) **Directions for Qs. 1 and 2 :**
 A + B means A is the brother of B
 A × B means A is the husband of B
 A - B means A is the daughter of B
 A/B means A is the wife of B.
 (i) What does the relation P - Q × R mean ?
 (a) R is the mother of P
 (b) R is the sister of P
 (c) R is the father of P
 (d) None of these

- (ii) How will we depict the relation Q is the sister-in-law of R ?
- $Q + P - R/S$
 - $Q/P + R - S$
 - $Q + P + R/S$
 - None of these
- (iii) If Rita is the wife of the father of Amit's son, then how is Rita related to Amit's mother ?
- Daughter
 - Daughter-in-law
 - Sister
 - None of these
- (iv) A is the maternal uncle of the father of B's son, then how is B related to A's only sister C ?
- Nephew
 - Son
 - Daughter-in-law
 - Cannot be determined
- (v) Looking at the photograph of a lady, a man said, "She is the sister of the son of the daughter of my mother's husband". How is the lady related to the man ?
- Neice
 - Daughter
 - Cousin
 - Sister
- (vi) A man while looking at the photo of another man said, "His maternal uncle is my mother's

father-in-law". How is the mother of the person in the photograph related to the first man's father ?

- (a) Mother
- (b) Aunt
- (c) Sister
- (d) Cousin

6. (a) A team of teachers has to be chosen out of 8 available teachers to represent the university at the Syllabus Council meet. The 8 teachers are Rawat, Abhishek, Vinod, Tarun, Kapil, Shalini, Vatsala and Prateek. The selection must follow the additional conditions :

- (1) The team must have a minimum of 4 members.
- (2) If Rawat is selected, then Vatsala has to be definitely selected.
- (3) Exactly one from Prateek or Tarun has to be selected.
- (4) Shalini and Rawat cannot be selected together.
- (5) Kapil and Shalini have to be selected together.
 - (i) If Rawat is a member of a team of 4 members, in how many ways can the team be selected ?
 - (a) 2
 - (b) 3
 - (c) 4
 - (d) 5

(ii) If Shalini is selected, what can be the maximum number of members in the team ?

- (a) 5
- (b) 6
- (c) 4
- (d) 7

(iii) Who among the following cannot be members of the same team ?

- (a) Rawat, Vinod
- (b) Kapil, Abhishek
- (c) Kapil, Rawat
- (d) Vatsala, Vinod

(b) **Directions for Questions :** The Pune team were participating in the IPL for the 2nd time. They already had local players and wanted to now select 5 more players. They decided to select 1 WK, 2 Bowlers and 2 Batsman.

The WKS were Mathew Wade and Adam Gilchrist.

The Bowlers were Brett Lee, Mitchel Johnson and Stuart Clark.

The Batsmen were Shaun Marsh, David Warner, David Hussey and Michael Hussey.

Further condition is as under :

- (1) Mathew Wade and David Hussey cannot be selected together.
- (2) Brett Lee is to be definitely selected.
- (3) Exactly 1 from Shaun Marsh and Warner must be selected.
- (4) Mitchel Johnson and David Hussey cannot be selected together.

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- (i) If David Hussey is selected, who has to be definitely selected ?
(a) Micheal Hussey
(b) Stuart Clark
(c) Shaun Marsh
(d) David Warner
- (ii) If Mathew Wade is selected, in how many ways can the 5 players be selected ?
(a) 4
(b) 2
(c) 3
(d) None of these
- (iii) Which among the following is not an acceptable combination of the 5 players to be selected ?
(a) Mathew Wade, Brett Lee, Mitchel Johnson, Shaun Marsh, Micheal Hussey
(b) Adam Gilchrist, Mitchel Johnson, Brett Lee, David Warner, Micheal Hussey
(c) Mathew Wade, Brett Lee, Mitchel Johnson, David Warner, Micheal Hussey
(d) None of these
- (iv) Who among the following cannot be selected together ?
(a) Brett Lee, Mitchel Johnson
(b) Stuart Clark, Brett Lee
(c) Mitchel Johnson, Stuart Clark
(d) None of these

7. (i) If DIGEST is coded as CJFFRU in a particular language, how will INSIST be coded in the same language ?
 (a) JMTHTS
 (b) HORJRU
 (c) HMRHRS
 (d) JOTJTU
- (ii) If A = 1, B = 3, C = 5 and so on in a particular coded language, how will LATE be written in that language ?
 (a) 233919
 (b) 231939
 (c) 221399
 (d) 231399
- (iii) If + means \times , \times means $/$, $-$ means $+$ and $/$ means $-$, then find the value of $2 \times 3 + 5 - 1/6$?
 (a) $-5/3$
 (b) 0
 (c) $150/3$
 (d) $-73/15$
- (iv) If 567 means "water is sweet", 879 means "ate good sweet" and 456 means "water is fresh", then which number in that language represents water ?
 (a) 5
 (b) 6
 (c) 7
 (d) Cannot be determined

Roll No. B.
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