

PARUL UNIVERSITY
PARUL INSTITUTE OF COMPUTER APPLICATION
BCA DEPARTMENT
Mid Term Examination – April, 2017

Subject Code: 05193251/05393251
Subject Title: E&MA - II
Course: BCA / IMCA Semester: 4

Date:10/04/2017
Time:10:00 A.M – 11:30 A.M
Total Marks: 30

SECTION – A

Q-1) Find the correct answer of any three. (Verbal classification) (03)

1. Choose the word which is different from the rest.

- A. Chicken B. Snake
C. Swan D. Crocodile E. Frog

2. Choose the word which is different from the rest.

- A. Pear B. Apple
C. Litchi D. Guava E. Orange

3. Choose the word which is different from the rest.

- A. Calendar B. Year
C. Date D. Month E. Day

4. Choose the word which is different from the rest.

- A. Cumin B. Groundnut
C. Cinnamon D. Pepper E. Clove

5. Choose the word which is different from the rest.

- A. Asia B. Argentina
C. Africa D. Australia E. Antarctica

Q-2) Find the correct answer of any four. (Blood relation) (04)

1) Six members of a family ABCDE and F are travelling together. B is the son of C but C is not the mother of B. A and C are married couple. E is the brother of C. D is the daughter of A. F is the brother of B. How many male members are there in the family ?

- A. 4 B. 3 C. 2 D. 1

2)

- (I). A, B, C, D, E and F are six members of a family.
(II). One couple has parents and their children in the family.
(III). A is the son of C and E is the daughter of A.
(IV). D is the daughter of F who is the mother of E.

Which of the following pairs is the parents of the couple ?

- A. CF B. AB C. AF D. BC

3) A woman introduces a man as the son of the brother of her mother. How is the man related to the woman?

- A. Uncle B. Grandson C. Cousin D. Son

4. A told B that C is his father's nephew. D is A's cousin but not the brother of C. What relationship is there between D and C ?

- A. Father B. Sisters C. Aunt D. Mother

5. A, B, C, D, E, F and G are members of a family consisting of four adults and three children, two of whom, F and G are girls. A and D are brothers and A is a doctor. E is an engineer married to one of the brothers and has two children. B is married to D and G is their child. Who is C ?

- A. E's daughter B. F's father C. G's brother D. A's son

Q-3) Find the correct answer of any four. (Analogy)

(04)

1) Poles : Magnet :: ? : Battery

- A. Energy B. Power C. Terminals D. Cells

2) Peace : Chaos :: Creation : ?

- A. Manufacture B. Destruction C. Build D. Construction

3) Architect : Building :: Sculptor : ?

- A. Museum B. Statue C. Chisel D. Stone

4) Horse : Mare ::

- A. Fox : Vixen B. Duck : Geese C. Dog : Puppy D. Donkey : Pony

5) Cricket : Pitch ::

- A. Ship : Dock B. Boat : Harbour C. Boxing : Ring D. Wrestling : Track

Q-4) Find the correct answer of the given questions.

(04)

1. Choose the alternative which is closely resembles the **mirror image** of the given combination.

ANS43Q12

- (1) AN24EQ12 (2) 21QEQ2NA
(3) 2NAEQ12 (4) 12QEQ2NA

2. Choose the correct **mirror image** of the given figure (X) from amongst the four alternatives.

3. Choose the alternative which is closely resembles the **water-image** of the given combination.

GR98AP76ES

(1) **GB68VP19E2**

(2) **GR88VP19E2**

(3) **GB88VP19E2**

(4) **GR88AP19ES**

4. Choose the correct **water image** of the given figure (X) from amongst the four alternatives.



(X)



(1)



(2)



(3)



(4)

SECTION - B

Q-1) Solve MCQ (Attempt any 03 from 05) (03)

- (a) A pipe can fill a cistern in 8 hours and another can empty it in 16 hours. If both the taps are opened simultaneously, find the time (in hours) to fill the cistern. (01)
 (i) 08 hours (ii) 16 hours (iii) 10 hours (iv) 12 hours
- (b) A man rows at a speed of 8 km/h in still water to a certain distance upstream and back to the starting point in a river which flows at 4 km/h. What is his average speed for total journey. (01)
 (i) 6 km/h (ii) 8 km/h (iii) 5 km/h (iv) 4 km/h
- (c) In a box there are 8 red, 7 blue and 6 green balls. One ball is picked up randomly. What is the probability that it is neither red nor green? (01)
 (i) $\frac{7}{19}$ (ii) $\frac{2}{3}$ (iii) $\frac{3}{4}$ (iv) $\frac{7}{21}$
- (d) There are 5 red, 4 white and 3 blue marbles in a bag. They are drawn one by one and arranged in a row. Assuming that all the 12 marbles are drawn, determine the number of different arrangements. (01)
 (i) 27720 (ii) 27000 (iii) 26270 (iv) 27270
- (e) In how many different ways can the letters of the word 'BANKING' be arranged? (01)
 (i) 5080 (ii) 5040 (iii) 2520 (iv) 2540

Q-2) Answer the following questions (Attempt any 04 from 05) (04)

- (a) What is the probability of getting 53 Mondays in a leap year? (01)
- (b) In how many ways can eight people be seated at a round table? (01)
- (c) In how many different ways can the letters of the word 'OFFICES' be arranged? (01)
- (d) A boat goes 13 km upstream in 39 minutes. The speed of stream is 3 km/h. What is the speed of boat in still water? (01)
- (e) Two Pipes A and B can fill a cistern in 20 minutes and 30 minutes. If both the pipes are opened simultaneously, how long will it take to fill the cistern? (01)

Q-3) Answer the following questions (Attempt any 2 from 3) (04)

- (a) Three Pipes A, B and C can fill a cistern in 10, 12 and 15 hours, respectively, while working alone. If all the three pipes are opened together, what will be the time taken to fill the cistern? (02)

- (e) Two Pipes A and B can fill a cistern in 20 minutes and 30 minutes. If both the pipes are opened simultaneously, how long will it take to fill the cistern ? (01)

Q-3) Answer the following questions (Attempt any 2 from 3) (04)

- (a) Three Pipes A, B and C can fill a cistern in 10, 12 and 15 hours, respectively, while working alone. If all the three pipes are opened together, what will be the time taken to fill the cistern? (02)
- (b) A boat is rowed down a river 40 km in 5 h and up a river 21 km in 7 h. Find the speed of the boat and the river ? (02)
- (c) A and B are mutually exclusive events of an experiment. If $P(\text{'not } A) = 0.65$, $P(A \cup B) = 0.65$ and $P(B) = p$, find the value of p . (02)

Q-4) Answer the following questions (Attempt any 1 from 2) (04)

- (a) A leak at the bottom of a tank can empty the full tank in 6 hours. An inlet pipe fills water at the rate of 4 liter per minute. When the tank is full, the inlet is opened and due to leak, the tank is empty in 8 hours. Find out the capacity of the tank? (04)
- (b) If the ratio $C(2n, 3) : C(n, 3)$ is equal to 11:1, find n ? (04)