Seat No:_____ Enrollment No:_____

# PARUL UNIVERSITY

## FACULTY OF IT & COMPUTER SCIENCE

## BCA Winter 2017 – 18 Examination

**Semester: 4** **Date: 12/01/2018**
**Subject Code: 05193251** **Time: 2.00 pm to 4.30 pm**
**Subject Name: English and Mathematical Aptitude- II** **Total Marks: 60**

**Instructions:**
1. All questions are compulsory.
2. Figures to the right indicate full marks.
3. Make suitable assumptions wherever necessary.
4. Start new question on new page.
5. No calculating devices is permitted and showing calculation is must

**Q.1 Find the blood relation from the given questions. (Each of 1 marks)**

**A.** 1. Pointing to a photograph of a boy Suresh said, "He is the son of the only son of my mother." How is Suresh related to that boy? **(05)**
A. Brother
B. Uncle
C. Cousin
D. Father

2. If A + B means A is the mother of B; A - B means A is the brother B; A % B means A is the father of B and A x B means A is the sister of B, which of the following shows that P is the maternal uncle of Q?
A. Q - N + M x P
B. P + S x N - Q
C. P - M + N x Q
D. Q - S % P

3. If A is the brother of B; B is the sister of C; and C is the father of D, how D is related to A?
A. Brother
B. Sister
C. Nephew
D. Cannot be determined

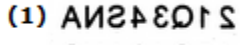
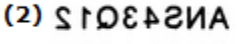
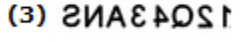
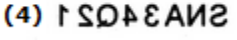
4. If A + B means A is the brother of B; A - B means A is the sister of B and A x B means A is the father of B. Which of the following means that C is the son of M?
A. M - N x C + F
B. F - C + N x M
C. N + M - F x C
D. M x N - C + F

5. Introducing a boy, a girl said, "He is the son of the daughter of the father of my uncle." How is the boy related to the girl?
A. Brother
B. Nephew
C. Uncle
D. Son-in-law

**B. Choose the correct option. 1 to 5 (mirror image) 6 to 10 (water image)(Each of 01 marks)** **(10)**

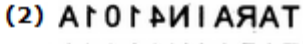
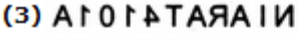
1. Choose the alternative which is closely resembles the mirror image of the given combination.

ANS43Q12

(1)  (2) 
(3)  (4) 

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

TARAIN1014A

(1)  (2) 
(3)  (4) 

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

1965 INDOPAK

(1) KAPODNI 5961 (2) PAKINDO1 695

(3) KAPODNI 5695 (4) KAPODNI 5691

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

MALAYALAM

(1) MALAYALAM (2) MALAYALAM

(3) WALAYALAM (4) MALAYALAM

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

EFFECTIVE

(1) EVITCEFFE (2) EVITCEFFE

(3) EFFECTIVE (4) EVITCEFFE

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

NUCLEAR

(1) RAELCUN (2) NUCLEAR

(3) NUCLEAR (4) NUCLEAR

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

bridge

(1) prigde (2) pridge

(3) prigde (4) pridge

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

GR98AP76ES

(1) GR68AP19ES (2) GR86AP19ES

(3) GR86AP19ES (4) GR86APIBES

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

A1M3b

(1) AIW3P (2) AIW3P

(3) AJW3P (4) AJWEP

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

E8t4e9C

(1) E8t4e9C (2) E8t4e9C

(3) E8t4e9C (4) E8t4e9C

**Q.2 Answer the followings. (1,2 3 questions are of 02 marks and 4,5,6, are of 03 Marks ) (15)**

**1. What are the different techniques for reading and comprehension?**

**2. Write a list of different strategies for reading and comprehension.**

**3. What is Reading comprehension?**

**4. Importance of Learning Reading Comprehension Skills?**

**5. What does "comprehension" mean?**

**6. Why is comprehension important?**

**Q.3 Answer the following. (Any three) (15)**

**1.** Two alloys contain silver and copper in the ratio 3:1 and 5:3. In what ratio the two alloys should be added together to get a new alloy having silver and copper in the ratio of 2:1?

a) 1:2 b) 2:1 c) 1:3 d) 3:1

**2.** Two taps A and B can fill a cistern in 30 minutes and 60 minutes respectively. There is third exhaust tap C at the bottom of the tank. If all taps are opened at the same time, the cistern will be full in 45 minutes. In what time can exhaust tap C empty the cistern when full?

a) 30 minutes b) 32 minutes c) 36 minutes d) 34 minutes

**3.** A motorboat covers a certain distance downstream in 6 hours but takes 8 hours to return upstream to the starting point. If the speed of the stream be 6 km/hr. Find the speed of the motor boat in the still water.

a) 40 km/hr b) 45 km/hr c) 43 km/hr d) 42 km/hr

**4.** The ratio of the age of father and son at present is 6:1. After 5 years, the ratio will become 7:2. Find the present age of the son.

a) 5 years b) 6 years c) 7 years d) 8 years

**Q.4 Answer the following. (A – Each carry 1mark) (B – Each carry 2 marks)**

**A.** **1.** How many different words can be formed with the letters of the word ' BHARAT' **(05)**

a) 300 b) 320 c) 340 d) 360

**2.** Find the probability of getting a sum of 7 or 11 in a simultaneous throw of two dice.

a) $\frac{1}{9}$ b) $\frac{2}{9}$ c) $\frac{4}{9}$ d) $\frac{7}{9}$

3. The age of father is 4 times the age of his son. If 5 years ago father's age was 7 times the age of his son at that time, what is the father's present age?

a) 40 years b) 41 years c) 42 years d) 44 years

4. Two numbers are in the ratio of 4:5 . If the difference between these number is 24, then find the numbers.

a) 92, 124 b) 96, 128 c) 94, 120 d) 98, 122

5. A pipe can fill a tank in 28 minutes. Find the time in which $1/7^{th}$ part of the tank will be filled

a) 2 minutes b) 3 minutes c) 4 minutes d) 5 minutes

**B.** 1. In how many ways can the letters of the word " BALLOON" be arranged so that two Ls do not come together? **(10)**

a) 900 b) 1200 c) 800 d) 600

2. Four coins are tossed once. Find the probability of getting exactly 3 tails.

a) $\frac{1}{16}$ b) $\frac{1}{4}$ c) $\frac{5}{16}$ d) None of these

3. If letters of the PENCIL are arranged in random order, what is the probability that N is always next to E?

a) $\frac{1}{6}$ b) $\frac{5}{6}$ c) $\frac{1}{3}$ d) $\frac{1}{9}$

4. It is required to seat 5 men and 4 women in a row so that the women occupy the even places. How many such arrangements are possible?

a) 2880 b) 2480 c) 3680 d) 3280

5. A man can row 7 km/hr in still water. If the river is running at 3 km/hr, it takes 6 hours more in upstream than to go downstream for the same distance. How far is the place?

a) 20 km b) 30 km c) 40 km d) 50 km

**OR**

**B.** 1. A man rows at a speed of 8 km/hr in still water to a certain distance upstream and back to the starting point in a river which flows at 4 km/hr. Find his average speed for total journey. **(10)**

a) 4 km/hr b) 5 km/hr c) 7 km/hr d) 6 km/hr

2. In how many different ways can the letters of the word ' ALLAHABAD' be permuted?

a) 7560 b) 7840 c) 7460 d) 7650

3. Two dice are together, what is the probability that the sum of two numbers is divisible by 3 or by 4?

a) $\frac{4}{9}$ b) $\frac{2}{9}$ c) $\frac{5}{9}$ d) $\frac{1}{9}$

4. How many ways two-digit odd numbers can be formed from the digits 1, 2, 3, 4, 5 and 8, if repetition of digit is allowed?

a) 5 b) 15 c) 25 d) 35

5. Six years ago Mahesh was twice as old as Suresh. If the ratio of their present ages is 9: 5 respectively. What is the difference between their present age?

a) 20 years b) 22 years c) 34 years d) 24 years