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AA—64A—2019

FACULTY OF COMPUTER STUDIES

B.Sc. (C.S.) (Second Year) (Third Semester) EXAMINATION

NOVEMBER/DECEMBER, 2019

COMPUTER SCIENCE

Paper S3.AEC.1

(Numerical Aptitude)

(Thursday, 21-11-2019)

Time : 2.00 p.m. to 5.00 p.m.

Time—3 Hours

Maximum Marks—75

N.B. :— (i) All questions are compulsory.

(ii) Figures to the right indicate full marks.

(iii) Assume suitable data, if required.

1. Attempt any *five* of the following :

15

(a) Find H.C.F. of 108, 288, 360.

(b) Find the sum of all even natural numbers less than 75.

(c) Find the average of first 20 multiples of 5.

(d) Evaluate 25% of 450 + 45% of 280.

(e) Person A does a work in 10 days and person B does the same work in 15 days. Find that how many days they work together to complete the same work.

(f) If a boat goes 7 km upstream in 42 minutes and speed of stream is 3 kmph, then find the speed of the boat in still water.

(g) At the rate of 6½% per annum simple interest, a sum of ₹ 4,500 will earn how much interest in 2 years and 5 months ?

P.T.O.

2. Attempt any *two* of the following : 10

- (a) Find H.C.F. of $\frac{2}{3}$, $\frac{8}{9}$, $\frac{64}{81}$ and $\frac{10}{27}$.
- (b) The sum of two numbers is 216 and their H.C.F. is 27, then find these two numbers.
- (c) Find the H.C.F. of 204, 1190 and 1445.

3. Attempt any *two* of the following : 10

- (a) Find average of all numbers between 7 and 53 which are divisible by 5.
- (b) Present ages of X and Y are in the ratio 5 : 6 respectively, seven years hence this ratio will become 6 : 7 respectively. What is the X's present age ?
- (c) The product of the ages of Ankit and Nikita is 240.

If the twice the age of Nikita is more than Ankit's age by 4 years ?
What is Nikita's age ?

4. Attempt any *two* of the following : 10

- (a) In the given expression find the value of x :
 $88\% \text{ of } 370 + 24\% \text{ of } 210 - x = 118.$
- (b) If the cost price is 96% of the selling price, then find the profit percentage.
- (c) Find cost price of an item, when selling price is ₹ 40.60 and gain = 16%.

5. Attempt any *two* of the following : 10

- (a) Worker A takes 8 hours to do a Job. Worker B takes 10 hours to do the same job. Find that how much time both A and B working together but independently to do that same job.
- (b) How many minutes does Aditya take to cover a distance of 400 m, if he runs at a speed of 20 km/hr.
- (c) A train 100 m long is running at the speed of 30 km/hr. Find the time taken by it to pass a man standing near the railway line.

6. Attempt any *two* of the following : 10

- (a) A man can row $7\frac{1}{2}$ kmph in still water. If in a river running at 1.5 km an hour; it takes him 50 minutes to row to a place and back, how far off is the place ?
- (b) In what ratio must water be mixed with milk to gain 20% by selling the mixture at cost price ?
- (c) What was the day of the week on 4th June, 2002 ?

7. Attempt any *two* of the following : 10

(a) Evaluate :

(i)
$$\frac{28!}{25!}$$

(ii) ${}^{45}P_{10}$

- (b) In a simultaneous throw of a pair of dice, find the probability of getting a total more than 7.
- (c) What will be the compound interest on a sum of ₹ 25,000 after 3 years at the rate of 12% per annum ?