VASAVI COLLEGE OF ENGINEERING *(Autonomous)*, HYDERABAD
B.E. III Year I-Semester Supplementary Examinations, May/June-2017

Finishing School-III : Soft Skills
(Common to all Branches)

Time: 1 ½ hours

Max. Marks: 35

Note: Answer ALL questions in Part-A and any FIVE from Part-B

Part-A (5 x 2 = 10 Marks)

1. I bought 5 pens, 7 pencils and 4 erasers. Rajan bought 6 pens, 8 erasers and 14 pencils for an amount which was half more than what I had paid. What percent of the total amount paid by me was paid for the pens?
   a) 37.5%   b) 62.5%   c) 50%   d) None of these

2. Two trains, 200 and 160 meters long take a minute to cross each other while traveling in the same direction and take only 10 seconds when they cross in opposite directions. What are the speeds at which the trains are traveling?
   a) 21 m/s; 15 m/s   b) 30 m/s; 24 m/s   c) 18 m/s; 27 m/s   d) 15 m/s; 24 m/s

3. A, B and C can do a work in 5 days, 10 days and 15 days respectively. They started together to do the work but after 2 days A and B left. C did the remaining work (in days)
   a) 1   b) 3   c) 5   d) 4

4. A can complete a project in 20 days and B can complete the same project in 30 days. If A and B start working on the project together and A quits 10 days before the project is completed, in how many days will the project be completed?
   a) 18 days   b) 27 days   c) 26.67 days   d) 16 days

5. After a discount of 11.11%, a trader still makes a gain of 14.28%. At how many percent above the cost price does he mark his goods?
   a) 28.56%   b) 35%   c) 22.22%   d) None of these

Part-B *(5 × 5 = 25 Marks)*
(All bits carry equal marks)

6. Each question given below has a problem and two statements numbered I and II giving certain information. You have to decide if the information given in the statements are sufficient for answering the problem. Indicate your answer as

   (i)   If the data in statement I alone are sufficient to answer the question;
   (ii) If the data in statement II alone are sufficient to answer the question;
   (iii) If the data in either in I or II alone are sufficient to answer the question;
   (iv) If the data even in both the statements together are not sufficient to answer the question;
   (v)   If the data in both the statements together are needed;

   a) X is an integer. Is X divisible by 5?
       I) 2X is divisible by 5.   II) 10X is divisible by 5.

   b) Is Anna the tallest in the class?
       I) Anna is the tallest girl   II) Anna is taller than all boys.

   c) If positive integer x is divided by 2, the remainder is 1. What is the remainder when x is divided by 4?
       I) $31 < x < 35$ II) X is a multiple of 3.

   d) If $x^6 - y^6 = 0$, what is the value of $x^3 - y^3$?
       I) x is positive   II) y is greater than 1.

   e) What is the value of $2x + y$?
       I) $x + y = 2$ II) $4x + 2y = 6$.

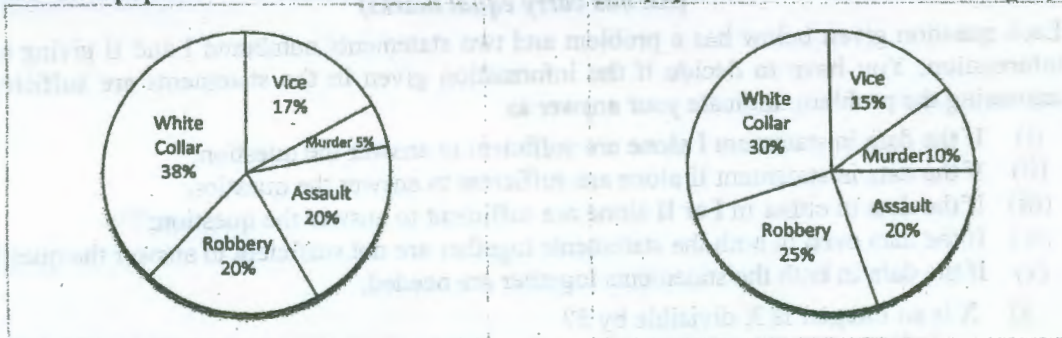7. a) 6, 8, 12, 18, 26, ____
      (1) 36   (2) 30   (3) 28   (4) 26

b) 63, 66, 71, 78, 87, ____
    (1) 98   (2) 89   (3) 93   (4) 95

c) 43, 44, 48, 57, 73, ____
    (1) 89   (2) 98   (3) 93   (4) 95

d) 4, 16, 64, 256, ____, 4096
    (1) 512   (2) 1024   (3) 2048   (4) 814

e) 10, 11, 101, 111, 1001, 1101, ____
    (1) 1111   (2) 1001   (3) 10001   (4) 1100

8. a) If TSEREVE and NOITACUDE stands for EVEREST and EDUCATION respectively. How will you code RED FORT.?
    (1) FDERTRO   (2) ROFDERT   (3) TROFDER   (4) TFRODER

b) If LODES is coded as 46321, how will you code the word DOES?
    (1) 4632   (2) 3261   (3) 3621   (4) 6321

c) If 'FIRE' is coded for a secret message to be teleprinted as 'EHQD', how is the reply 'DONE' to be relayed?
    (1) DMOE   (2) CNMD   (3) DLNC   (4) DNDE

d) In a certain language 'I like you' is written as 123; 'you love me and her' is written as 34567 and 'they are crazy' is written as 890. How will you write 'you, they and I are crazy and love her"?
    (1) 38619604   (2) 38160964   (3) 381690647   (4) 386190647

e) RHINO : POJIS :: ? : ZGJOHJT
    (1) HASTILY   (2) TASTEFUL   (3) SERIOUS   (4) SIGNIFY

9. Common data for all the five sub-questions-
Distribution of criminal activity by category of crime for country x in 1990 and projected for 2000.

Criminal population: 10 million in 1990   Criminal population: 20 million in 2000(projected)

a) What is the projected number of white collar criminals in 2000?
    (1) 1 million   (2) 3.8 million   (3) 6 million   (4) 8 million

b) The ratio of the number of robbers in 1990 to the number of projected robbers in 2000 is
    (1) $2/5$ (2) $3/5$ (3) 1   (4) $3/2$

c) From 1990 to 2000, there is a projected decrease in the number of criminals for which of the following categories?
    (I) Vice   (II) Assault   (III) White collar
    (1) None   (2) I only   (3) II only   (4) II & III only

d) What is the approximate projected percent increase between 1990 and 2000 in the number of criminals involved in Vice?
    (1) 25%   (2) 40%   (3) 60%   (4)75%

e) The projected number of Robbers in 2000 will exceed the number of White collar criminals in 1990 by

(1) 1.2 million   (2) 2.3 million   (3) 3.4 million   (4) 5.8 million

10. a) 100 workers can finish the task in 50 days. 100 workers started the task and worked for 20 days. Now because of unforeseen situations 80 workers have to leave the work. Find the total number of days required to complete the task.

(1) 150 days   (2) 170 days   (3) 200 days   (4) 250 days

b) Subhash can copy 50 pages in 10 hours. Subhash and Prakash together can copy 300 pages in 40 hours. In how much time can Prakash copy 30 pages?

(1) 13 hours   (2) 12 hours   (3) 11 hours   (4) 9 hours

c) In a fort there was sufficient food for 200 soldiers for 31 days. After 27 days 120 soldiers left the fort. For how many extra days will the rest of the food last for the remaining soldiers?

(1) 12 days   (2) 10 days   (3) 8 days   (4) 6 days

d) A cistern is normally filed in 5 hours. However, it takes 6 hours when there is leak in its bottom. If the cistern is full, in what time shall the leak empty it?

(1) 6 hours   (2) 5 hours   (3) 30 hours   (4) 15 hours

e) A is 4 times as fast as B and is therefore able to finish a work in 45 days less than B. A & B, working together, can complete the work in

(1) 12 days   (2) 16 days   (3) 8 days   (4) None of these

11. a) A train does a journey without stopping in 8 hours. If it had traveled 5km an hour faster, it would have done the journey in 6 hour 40 minutes. What is its slower speed?

(1) 25km/hr   (2) 15km/hr   (3) 10km/hr   (4) 5km/hr

b) If I walk 4km/hr, I miss the bus by 10 minutes. If I walk at 5km/hr, I reach 5 minute before the arrival of the bus. How far I walk to reach the bus stand?

(1) 10km   (2) 5km   (3) 8 km   (4) 12 km

c) If a car moves from A to B at a speed of 60km/hr and comes back from B to A at a speed of 40km/hr, then find its average speed during the journey.

(1) 50km/hr   (2) 48km/hr   (3) 60km/hr   (4) 40km/hr

d) Two trains 250m & 150m long respectively are running on parallel lines. If they are moving in the same direction the faster train crosses the slower train in 40 seconds. If they are moving in opposite direction they pass each other in eight seconds. What is the speed of the faster train?

(1) 120 kmph   (2) 108 kmph   (3) 130 kmph   (4) None of train

e) Normally it takes 3 hrs for a train to run from A to B. One day due to a minor trouble, the train had to reduce the speed by 12km/hr and so it took $\frac{3}{4}$ of an hr more than usual. What is the distance from A to B?

(1) 200km   (2) 180km   (3) 150km   (4) 120km

12. a) On dividing a number by 4, 5 & 6, we get 3, 4 & 5 as remainder. Find the number.

(1) 59   (2) 60   (3) 61   (4) 81

b) On dividing a number by 5, 6 & 7, if we get 2 as remainder always, find that smallest number.

(1) 210   (2) 212   (3) 420   (4) 422

c) A number after adding 7 is divisible by 10, 11 & 12. The number is _____.

(1) 660   (2) 653   (3) 453   (4) 473

d) $(149)_{10} = (\ )_7$

(1) 302   (2) 149   (3) 151   (4) 342

e) If A381 is divisible by 11, find the value of the smallest natural number A?

(1) 5   (2) 6   (3) 7   (4) 9