

BACHELOR OF TECHNOLOGY (CBCS) (2020 COURSE)

Information Technology

B.Tech.Sem - VI :SUMMER : 2023

SUBJECT : QUANTITATIVE TECHNIQUES, COMMUNICATION & VALUES

Day : Tuesday

Time : 02:30 PM-05:30 PM

Date : 30-05-2023

S-24746-2023

Max. Marks : 60

N.B:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Assume suitable data if **necessary**.
- 4) Calculator and any smart gadgets are not allowed.

Q.1 Solve the following questions:

(10)

- 1) What will be the ratio of simple interest earned by certain amount at the same rate of interest for 6 years and that for 9 years?
i) 1:3 ii) 1:4 iii) 2:3 iv) Data inadequate v) None of these
- 2) What is the difference between the compound interests on Rs. 5000 for $1\frac{1}{2}$ years at 4% per annum compounded yearly and half-yearly?
i) Rs.2.04 ii) Rs.3.06 iii) Rs.4.80 iv) Rs. 8.30
- 3) The sum of the ages of 5 children born at the intervals of 3 years each is 50 years what is the age of the youngest child?
i) 6 year ii) 10 year iii) 8 year iv) 4 year
- 4) The average of 12, 27, 36 and x is 20. What is the value of x?
i) 6 ii) 5 iii) 8 iv) 4
- 5) A vendor bought toffees at 6 for a rupee. How many for a rupee must he sell to gain 20%?
i) 3 ii) 4 iii) 5 iv) 6
- 6) If a person walks at 14 km/hr instead of 10 km/hr, he would have walked 20 km more. The actual distance travelled by him is :
i) 50 km ii) 56 km iii) 70 km iv) 80 km
- 7) The question given below consists of a question followed by two statements. You have to study the question and the statements and decide which of the statement(s) is/are necessary to answer the question
What is the speed of the boat in still water?
I) It takes 3 hours to cover the distance between A and B downstream.
II) It takes 6 hours to cover the distance between A and B upstream.
a) I alone sufficient while II alone not sufficient to answer
b) II alone sufficient while I alone not sufficient to answer
c) Either I or II alone sufficient to answer
d) Both I and II are not sufficient to answer
e) Both I and II are not necessary to answer

P.T.O.

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- 8) Tea worth Rs. 126 per kg and Rs. 135 per kg are mixed with a third variety in the ratio 1: 1: 2. If the mixture is worth Rs 153 per kg, the price of the third variety per kg will be:
i) Rs. 169.50 ii) Rs.170 iii) Rs. 175.50 iv) Rs.180
- 9) Three unbiased coins are tossed. What is the probability of getting at most two heads?
i) 5/8 ii) 7/8 iii) 1/4 iv) 3/8
- 10) A can finish a work in 24 days, B in 9 days and C in 12 days. B and C start the work but are forced to leave after 3 days. The remaining work was done by A in
i) 5 days ii) 6 days iii) 10 1/4 days iv) 10 days

Q.2 Solve the following questions:

(10)

- 1) The bar graph given below shows the data of the production of paper (in lakh tonnes) by three different companies X, Y and Z over the years. (Q. no. 01 to 03)

Production of Paper (in lakh tonnes) by Three Companies X, Y and Z over the Years.



- 1) For which of the following years, the percentage rise/fall in production from the previous year is the maximum for company Y?
i) 1997 ii) 1998 iii) 1999 iv) 2000
- 2) The average production for five years was maximum for which company?
i) X ii) Y iii) Z iv) X and Z both
- 3) What is the ratio of the average production of Company X in the period 1998-2000 to the average production of Company Y in the same period?
i) 1:1 ii) 15:17 iii) 23:25 iv) 27:29
- 4) Today is Monday. After 87 days, it will be:
i) Wednesday ii) Saturday iii) Tuesday iv) Thursday
- 5) In certain code language VISION is written as WGTGPL, then in the same code language MISSION is written as:
i) NGTQJMO ii) NGTJQOM iii) NGQTJMO iv) JMOQPTH

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- 6) Rahul put his timepiece on the table in such a way that a way that at 6 p.m. hour hand points to North. In which direction the minute hand will point at 9.15 p.m.?
i) South-East ii) South iii) North iv) West

- 7) In the following question two statements are given. Which are followed by four conclusions (1), (2), (3) and (4). Choose the conclusions which logically follow from the given statements.

Statements: All the phones are scales. All the scales are calculators.

- Conclusions: 1) All the calculators are scales.
2) All the phones are calculators.
3) All the scales are phones.
4) Some calculators are phones.

- i) Only 1 & 4 ii) Only 3 & 4 iii) Only 2 & 4 iv) Only 1 & 2 v) Only 1 & 3

- 8) 9, 16, 23, 30, 37, 44, 51, ?, ?

- i) 59 66 ii) 56 62 iii) 58 66 iv) 58 65 v) 54 61

- 9) Pointing to Gopi, Nalini says, "I am the daughter of the only son of his grandfather." How Nalini is related to Gopi?

- i) Niece ii) Daughter iii) Sister iv) Cannot be determined

- 10) If A \$ B means A is the brother of B; A @ B means A is the wife of B; A # B means A is the daughter of B and A * B means A is the father of B, which of the following indicates that U is the father-in-law of P.

- i) P @ Q \$ T # U * W ii) P @ W \$ Q * T # T # U
iii) P @ Q \$ W * T # U iv) P @ Q \$ T # W * U

Q.3 A) Each of the question given below consists of four sentences on a topic (05)

numbered a to d. There may be an error in any part of the sentence. Read the sentence and identify the part which has the error and write it as the correct answer. If there is no error, mark the answer as (e)

- 1) a) By the time b) Harish and his friends
c) reached the station d) the train left
- 2) a) the green building b) besides the bank
c) was the building d) in which my doctor lives.
- 3) a) unless you donot complete b) the work
c) you will not be allowed d) to leave this place
- 4) a) Though they require b) only fifteen candidates
c) they have received d) 12,000 applications
- 5) a) Each of the players b) have played
c) well d) in the recent games

- Q.3 B) In each of the sentences, one word is given in bold and four options are given. Select the word or phrase nearest in meaning to the word given in bold. (05)
- 1) The inspector was a **vigilant** man.
 - a) Intelligent
 - b) Ambitions
 - c) Watchful
 - d) Smart
 - 2) The professor is one of the most **erudite** in our college.
 - a) Boring
 - b) Pleasant
 - c) Learned
 - d) Smart
 - 3) The tribunals order may finally nudge the two warring groups to come to an **amicable** solution.
 - a) Just
 - b) Appropriates
 - c) Durable
 - d) Friendly
 - 4) The poor old man seems **famished**
 - a) Exhausted
 - b) Peer wish
 - c) Hungry
 - d) Relaxed
 - 5) The actress '**Charisma**' has got her many fans.
 - a) Power
 - b) Humility
 - c) Condor
 - d) Magnetic appear
- Q4 a) What is a lender? What are the main qualities that a leader should possess? (05)
- b) What are interpersonal skills? How they are vital in team building? (05)
- OR
- Q4 a) Why stress management and time management go hand in hand? (05)
Highlights strategies of stress management.
- b) Explain the term 'Emotional Intelligence'. Why EI is important for personal as well as professional lives? (05)
- Q5 a) Public speaking is an art. Justify this statement with explaining the important tips of public speaking. (05)
- b) What preparation a candidate has to do before the interview so that he can perform well during the interview? (05)
- OR
- Q5 a) Elaborate the role of body language and non-verbal codes in making an effective presentation. (05)
- b) Write an email to your team leader explaining the progress of your recent project. (05)
- Q6 a) What are the etiquette that one should follow in social and office setting? (05)
- b) How does the company approach CSR and what type of initiatives are done for sustainability by the company? (05)
- OR
- Q6 a) What is meant by ethical reasoning and professional behavior? What are its importance in the corporate domain? (05)
- b) Write some tips about maintaining balance between personal and professional life. (05)