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**GOPAL GOVIND POY RAITURCAR COLLEGE OF COMMERCE & ECONOMICS. PONDA-GOA.**  
**B.C.A. UGC-CCFUP (SEMESTER-III) REGULAR EXAMINATION, OCTOBER/NOVEMBER 2024.**

**MINOR COURSE: REASONING TECHNIQUES**

**Duration: 2Hrs**

**No. of pages: 04**

**Total Marks: 80**

**Instructions:**

- 1. The Question Paper comprises of 4 pages.**
- 2. All Questions are compulsory, However internal choice is available.**
- 3. Figures to the right indicate marks.**
- 4. BL indicates Bloom's Level and CO indicates Course outcome.**

**Q.1. A. Answer the following.**

**(4\*2=8) [BL-1,CO-2]**

- a) Define Logic.
- b) What is Syllogism?
- c) What is an argument in Logical Reasoning?
- d) What is a Venn-Diagram?

**Q.1. B. Answer the following.**

**(4\*2=8) [BL-1,CO-1]**

- a) Give any 2 examples of Proposition.
- b) Give any 2 examples of Inductive Arguments.
- c) State any 2 rules for Direction Sense Test.
- d) Give any 2 Examples of Analogies.

- Q.2 A) i) Explain any 2 connectives used in Compound Proposition.**  
**ii) State any 2 rules for Blood Reasoning test.**

**(4) [BL-1,CO-2]**

**(2) [BL-1,CO-1]**

**Total: 6 Marks**

**OR**

- Q.2 A) iii) Explain Space Visualization in Reasoning.**  
**iv) State any 2 Strategies for Solving Coded Inequalities.**

**(4) [BL-1,CO-2]**

**(2) [BL-1,CO-1]**

**Total: 6 Marks**

- Q.2 B) i) What is Data Interpretation? Give any 2 Examples.**  
**ii) Explain Deductive Arguments. Give Examples.**

**(6) [BL-1,CO-2]**

**(4) [BL-1,CO-2]**

**Total: 10 Marks**

- Q.3 A) i) Complete the following series.**  
**FAG, GAF, HAI, IAH, \_\_\_\_\_**

**(3) [BL-3,CO-3]**

- ii) One morning Udai and Vishal were talking to each other face to face at a crossing.**  
**If Vishal's shadow was exactly to the left of Udai, which direction was Udai facing?**

**(3) [BL-3,CO-3]**

**Total: 6 Marks**

**OR**

- Q.3 A) iii) Pointing to a photograph Lata says, "He is the son of the only son of my grandfather."**  
**How is the man in the photograph related to Lata?**

**(3) [BL-3,CO-3]**

- iv) A, P, R, X, S and Z are sitting in a row. S and Z are in the centre. A and P are at the ends. R is sitting to the left of A. Who is to the right of P ?**

**(3) [BL-3,CO-3]**

**Total: 6 Marks**

**Q.3 B) i.a)**How many 3's are there in the following sequence which is neither preceded by nor

immediately followed by 9?

**(3) [BL-3,CO-3]**

9 3 6 6 3 9 5 9 3 7 8 9 1 6 3 9 6 3 9

i. b) In a row of trees, one tree is fifth from either end of the row. How many trees are there in the row?

**(3) [BL-3,CO-3]**

ii) A bus for Delhi leaves every thirty minutes from a bus stand. An enquiry clerk told a passenger that the bus had already left ten minutes ago and the next bus will leave at 9.35 a.m. At what time did the enquiry clerk give this information to the passenger?

**(4) [BL-3,CO-3]**

**Total: 10 Marks**

**Q.4 A) i)** choose and write the correct option.

**(3) [BL-4,CO-4 ]**

**Statement:** Should India encourage exports, when most things are insufficient for internal use itself?

**Arguments:**

1. Yes. We have to earn foreign exchange to pay for our imports.
2. No. Even selective encouragement would lead to shortages.

- a) Only argument I is strong
- b) Only argument II is strong
- c) Either I or II is strong
- d) Neither I nor II is strong
- e) Both I and II are strong

**Q.4 A) ii)** choose and write the correct option.

**(3) [BL-4,CO-4 ]**

**Statements:** India is a country of multiple languages.

**Conclusions:**

1. All Indians should learn multiple languages.
2. Every country has multiple languages

- a. Only conclusion I follows.
- b. Only conclusion II follows.
- c. Both I and II follows.
- d. Neither I nor II follows.
- e. Either I or II follows.

**OR**

**Q.4 A) iii)** choose and write the correct option.

**(3) [BL-4,CO-4 ]**

**Statement:** Do not throw the garbage outside the dustbin.

**Assumptions:**

- (I) It is possible to throw the garbage outside the dustbin.
- (II) Such warning will have some effect.

- a. Only assumption I is implicit
- b. Only assumption II is implicit

- c. Either I or II is implicit
- d. Neither I nor II is implicit
- e. Both I and II are implicit

**Q.4 A) iv)** choose and write the correct option.

**(3) [BL-4,CO-4 ]**

**Statements:** In a class of 30 students, 60% are girls.

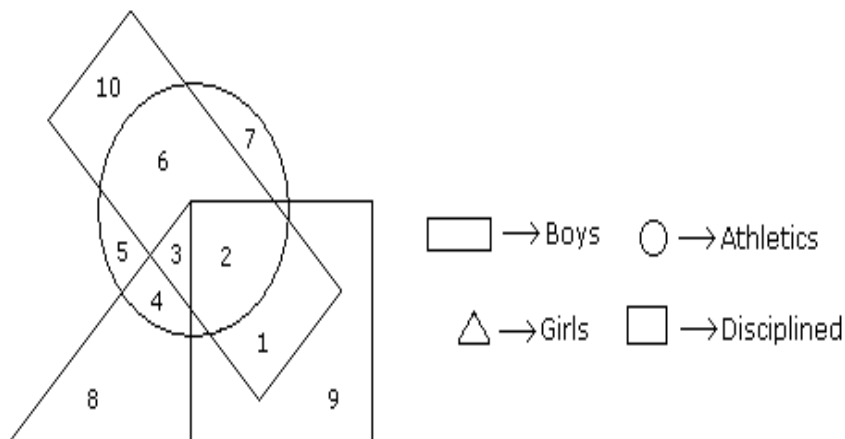
**Conclusions:**

- I) There are 18 boys in the class.
  - II) Girls are the majority in the class.
- a. Only conclusion I follows.
  - b. Only conclusion II follows.
  - c. Both I and II follows.
  - d. Neither I nor II follows.

**Total: 6 Marks**

**Q.4 B) i.** study the following diagram.

**(3\*2=6) [BL-4,CO-4 ]**



**Q.4 B) i.a)** The boys who are athletic and are disciplined are indicated by which number?

**Q.4 B) i.b)** The girls who are athletic and are disciplined are indicated by which number?

**Q.4 B) ii. a)** Of the following, five are alike in a certain way and so form a group,

With explanation, Write the one that does not belong to that group.

**(3) [BL-4,CO-4 ]**

Tortoise , Frog , Rat , Snake , Mongoose

**Q.4 B) ii. b)** choose and write the correct option.

**(3) [BL-4,CO-4 ]**

**Statements:** All the harmoniums are instruments. All the instruments are flutes.

**Conclusions:**

- 1. All the flutes are instruments.
  - 2. All the harmoniums are flutes.
- a) Only (1) conclusion follows
  - b) Only (2) conclusion follows
  - c) Either (1) or (2) follows
  - d) Neither (1) nor (2) follows
  - e) Both (1) and (2) follow

**Total: 12 Marks**

- Q.5 A) i)** write in symbolic form the following propositions. **(3) [BL-4,CO-4 ]**
- a) Goa is a small state and I stay here.
- b) I like singing but not dancing.
- ii)** Let p: She is beautiful **(3) [BL-4,CO-4 ]**
- q: She is intelligent
- r: She likes dancing
- write the following in sentences:
- a)  $(p \wedge q)$
- b)  $(\sim p \wedge \sim r)$

**Total: 6 Marks**

**OR**

- Q.5 A) iii)** Determine the truth values of the following statement: **(3) [BL-4,CO-4 ]**
- $(\sqrt{30} > 5) \wedge (\sqrt{30} > 7)$

iv) In a family where P is the mother of Q, and Q is the mother of R, analyze the relationships.

**(3) [BL-4,CO-4 ]**  
**Total: 6 Marks**

- Q.5 B) i)** Study the following table and answer the questions based on it.  
Expenditures of a Company (in Lakh Rupees) per Annum Over the given Years.

**(4) [BL-3,CO-4 ]**

Year	Item of Expenditure				
	Salary	Fuel and Transport	Bonus	Interest on Loans	Taxes
1998	288	98	3.00	23.4	83
1999	342	112	2.52	32.5	108
2000	324	101	3.84	41.6	74
2001	336	133	3.68	36.4	88
2002	420	142	3.96	49.4	98

- a) What is the average amount of interest per year which the company had to pay during this period?
- b) The total amount of bonus paid by the company during the given period is approximately what percent of the total amount of salary paid during this period?

- Q.5 B) ii)** choose and write the correct option. **(4) [BL-3,CO-4 ]**

**Question:** In which year was Rahul born ?

**Statements:**

1. Rahul at present is 25 years younger to his mother.
  2. Rahul's brother, who was born in 1964, is 35 years younger to his mother.
- a) I alone is sufficient while II alone is not sufficient
- b) II alone is sufficient while I alone is not sufficient
- c) Either I or II is sufficient
- d) Neither I nor II is sufficient
- e) Both I and II are sufficient

**Total: 8 Marks**