

Goa Vidyaprasarak Mandal's

Gopal Govind Poy Raiturcar College of Commerce & Economics, Farmagudi.  
B.C.A. (Semester I) Intra Semester Assessment (ISA) (Test III), September 2018

**PROBLEM SOLVING & PROGRAMMING CONCEPTS**

Duration: 45minutes

Marks:15

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- Q.1) State true or false. (3mks)
- a) An array can store infinite data of similar type.
  - b) The gets function automatically appends the null Character at the end of the string.
  - c) Accessing an array outside its range is a compile time error.
- Q.2) What is an array? (2mks)
- Q.3) Find out errors ,if any, in the following code segment. (2mks)
- a) `int X[3,4]`  
`int matrix[3],[5];`
- Q.4) State and explain various functions used to read strings. (3mks)
- Q.5) Write a C program to compare two strings. (5mks)

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**BASIC MATHEMATICS**

Duration: - 45 minutes

Marks: - 15

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**Q. Answer ANY 3 of the following questions: (5 × 3 = 15 Marks)**

Q1. Prove that

$$\text{a) } \frac{1 - \cos \theta}{1 + \cos \theta} = \frac{\sec \theta - 1}{\sec \theta + 1}$$

$$\text{b) } \tan^2 \theta = \frac{1 - \cos^2 \theta}{\cos^2 \theta}$$

Q2. The sum of 3 terms in arithmetic progression is 15 and their product is 80. Find the 3 numbers.

Q3. Find 3 numbers in Geometric progression whose sum is 26 and the product is 126.

Q4. Find the fifth roots of unity.

Q5. Find

$$\text{a) } \frac{Z_1}{Z_2} \qquad \text{b) } Z_1 Z_2$$

Where  $Z_1 = 7 + 2i$  &  $Z_2 = 10 - 7i$

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**Environmental Studies**

Duration: - 30 minutes

Marks: - 15

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**Q1. Fill in the blanks with the appropriate alternatives given below. (05)**

- a) The number of different species that are represented in a given community is.....  
(Genetic diversity; Species diversity; Ecosystem diversity)
- b) State bird of Goa is.....  
(Red whiskered bulbul; Ruby throated yellow bulbul; black hooded bulbul)
- c) The “Hottest hotspot” in India is.....  
(Indo-Burma; the Western Ghats; Eastern Himalayas)
- d) The home for the Royal Bengal Tiger in India is.....  
(The Sahyadris; Gir; Sundarbans)
- e) An example of In-Situ conservation is.....  
(Zoological park; Wildlife Sanctuary; Botanical garden)

**Q2. Answer any five of the following. (10)**

- a) Explain “Invasive species” with two examples.
- b) Why Biodiversity needs to be protected?
- c) State any four bio-geographical regions of India.
- d) Discuss any two methods of Ex-Situ conservation.
- e) What is the importance of “Sacred Groves”?
- f) Explain any two threats to Biodiversity.
- g) Why is India called a Mega-Diverse nation?

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**BUSINESS ACCOUNTING**

**Duration: 45minutes**

**Marks: 15**

**Q.1)** You are given the following extracts of ledger balances taken from Sunshine company.ltd for the year ending 31<sup>st</sup> March 2017.Prepare a statement of Profit and loss account as per revised schedule of the companies Act. **(15 Marks)**

<b>Particulars</b>	<b>Rs.</b>
Opening stock of finished goods	1,90,500
Cost of material consumed	2,92,000
Leave encashment	68,000
Interest on debentures paid	16,250
Goodwill written off	18,000
Provision for taxation	30,000
Office expenses	8,250
Closing stock of finished goods	2,03,000
Discount earned	4,900
Cash sales	2,66,000
Credit sales	3,87,500
Income tax refund	11,500
Sales returns	17,000
Provision for bad debts	8,200
Delivery expenses	7,200
Printing and stationery	22,600
Factory expenses	82,000
Bonus to employees	32,000
Depreciation on Plant and Machinery	50,000

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**COMPUTER ORGANISATION AND ARCHITECTURES**

Duration:- 45 minutes

Marks:- 15

**ANSWER THE FOLLOWING :-**

1. What is Assembly Language? (2 mks)
2. Explain the Semiconductor Memory. (2 mks)
3. Explain the Bus Interface Unit of 8086 Architecture. (3 mks)
4. Explain the various features of RAID 2 by giving an appropriate example. (4 mks)
5. Explain the Three -Level Cache Organization with the diagram. (4 mks)

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