

**Goa Vidyaprasarak Mandal's**  
**Gopal Govind Poy Raiturcar College of Commerce & Economics**  
**Ponda Goa**  
**BCA SEMESTER II, ISA-I JANUARY 2016**  
**DATA STRUCTURES**

Marks: 15

Duration: 45 minutes

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- Q.1. Define a Data Structure. (2)
- Q.2. State why stack is called a LIFO Structure. (2)
- Q.3. Write C implementation for any 1 primitive operation on stack. (2)
- Q.4. Write an algorithm for validating an expression for parenthesis. (2)
- Q.5. Write the prefix and postfix form of the following expressions. (2)
- a) A\$B\$C.    b) A/B\*(c+D)
- Q.6. Write a C program using stack to evaluate a postfix expression. (5)

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**COST ACCOUNTING**

Marks: 10

Duration: 45 minutes

Q.1) M/s Shaileja enterprises furnishes you the following information regarding their cost records for the year ended 31<sup>st</sup> March 2015.

Opening stock of raw materials	175000
Opening stock of W.I.P.	110000
Opening stock of finished goods	155000
Factory cleaning	12000
Office lighting	17000
Carriage inward	5500
Factory Manager's salary	35000
Depreciation on office premises	9500
Direct wages	97000
Motive power	45000
Closing stock of raw materials	98500
Closing stock of W.I.P.	60000
Closing stock of finished goods	85000
Depreciation on factory premises	17000
General expenses	18000
Administrative manager's salary	40000
Purchases	225000
Factory rent, rates & taxes	20000
Printing and stationery	22000
Selling overheads	@ 30% on works cost.
Profit	@ 16.66% on selling price.

You are asked to draw a statement of cost for the year ended 31<sup>st</sup> March 2015. **(10 marks)**

**Q.2)** Define cost sheet.

**(1 mrk)**

**Q.3)** Differentiate between cost accounting and financial accounting.

**(4 marks)**

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ENVIRONMENTAL STUDIES**

Marks: 10

Duration: 45 minutes

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**I) Choose the correct alternative and fill in the blanks (4)**

1. According to WHO, the optimum noise level for day time is\_\_\_\_\_.
  - a. 80dB
  - b. 35dB
  - c. 45dB
  - d. 55dB
  
2. \_\_\_\_\_ is a secondary pollutant of air.
  - a. Sulphur oxides
  - b. Hydrocarbons
  - c. Ozone
  - d. Nitrogen oxide
  
3. \_\_\_\_\_ is an example of non-point source of water pollution.
  - a. Municipal waste
  - b. Industrial discharge
  - c. Acid rain
  - d. None of the above
  
4. Behavioral disorders, development of destructive nature in later stages and neurotics traits as adults are the outcome of \_\_\_\_\_.
  - a. Noise pollution
  - b. Water pollution
  - c. Air pollution
  - d. Soil pollution

**II) Answer the following questions in one or two sentences.**

**(6)**

1. Define Air pollution?
2. Write any two causes of Soil pollution?
3. What is Eutrophication?
4. Write any two effects of Water pollution on human health?
5. Give any two control measures of Soil pollution?
6. Write any two effects of Air pollution on plants?

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**DISCRETE MATHEMATICS**

Marks: 15

Duration: 45 minutes

Instructions:-1) Answer all the questions.  
2) Do not use calculators.

Q. 1) a) Perform the following addition. ( 1 mk)  
 $1100011 + 100111$

b) Convert 2435 from decimal to binary form. ( 2 mks)

c) Convert 5237 from octal to decimal form. ( 2 mks)

Q. 2) a) Write following statement in symbolic notations.

“Mathematics is easy if and only if he is intelligent”. ( 2 mks)

b) Express the following compound statement in sentence.

$$(p \wedge q) \rightarrow (\sim p \vee q)$$

Where p: Heena is a singer

q: Heana is studious.

(2 mks)

c) If p, q, r & s are assigned the truth values T, F, T & T  
**Find the truth value of**

$$(p \wedge q) \rightarrow (\sim r \vee \sim s) \quad ( 2 \text{ mks})$$

**Q. 3) Prove by using Mathematical Induction.**

$$1^3 + 2^3 + 3^3 + \dots + n^3 = \frac{n^2(n+1)^2}{4} \quad (4 \text{ mks})$$

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G.V.M's G.G.P.R. COLLEGE OF COMMERCE & ECONOMICS  
FARMAGUDI, PONDA-GOA

INTRA SEMESTER ASSESSMENT TEST-I  
SEMESTER II  
JANUARY 2016

F.Y.B.C.A.  
OPERATING SYSTEM CONCEPTS

MARKS:- 15

Duration:- 45 minutes

ANSWER THE FOLLOWING :-

1. What is the relationship between Kernel, Operating System and Hardware ? (2 mks)
2. What are the basic elements of a Computer System ? (2 mks)
3. Explain – “ Time sharing systems can be used to handle multiple interactive jobs. ” (3 mks)
4. Explain the various major Operating System Services. (4 mks)
5. Explain the Process State with the help of a diagram. (4 mks)

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