

Total No. of Questions- 12 }

{ Total No. of Printed Pages - 2

CBS - VIs/6(R&P)

215412

B.C.A

COURSE NO. UBCATE-602

(SYSTEM ANALYSIS AND DESIGN)

Time Allowed: 1 ½ Hours

Maximum Marks: 40

Section - A

Note: Attempt all questions. Each question carry 1 mark.

1. At project completion phase, obstacles tends to be

(a) Soluble

(b) Clustered

(c) Insoluble

(d) Visible

2. Define the term Feasibility analysis.

3. Why do we require software modifications?

4. If desired rate of return is minimum by actual rate of return then it is classified as cash flow for

(a) Future

(b) Present

(c) Positive

(d) Negative

[Turn Over

5. An _____ is a set of entities of the same type that share the same properties, or attributes.

- (a) Entity set
- (b) Attribute set
- (c) Relation set
- (d) Entity model

Section - B

Note: Attempt any three questions. Each question carries 5 marks.

- 6. Discuss types of testing.
- 7. Discuss cost benefit analysis.
- 8. Explain file and their types.
- 9. Explain Database design with an example.

Section - C

Note: Attempt any two questions. Each question carries 10 marks.

- 10. Discuss DFD with example and the use of various symbol used.
- 11. What are various types of documents? Discuss significance of each.
- 12. What are essential requirements of system analyst? Discuss role played by the system analyst.

Total No. of Questions- 15]

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CBS - VI/6(R&P)

215402

B.C.A

COURSE NO. UBCATE-601

(CLOUD COMPUTING)

Time Allowed: 2 ½ Hours

Maximum Marks: 80

Section - A

Note: Attempt all Questions. Each question carries 3 marks.

- Q1. What are the benefits of Cloud computing?
- Q2. How grid computing differs from cloud computing?
- Q3. What is SaaS? List some SaaS platforms?
- Q4. Explain virtual storage containers.
- Q5. What do you understand by Data Privacy?

Section - B

Note: Attempt all questions. Each question carries 7 marks.

- Q6. Explain cloud computing architecture.
- Q7. Explain Utility Computing in detail.
- Q8. What are the issues and applications of infrastructure as a Service (IaaS)?
- Q9. Mention in detail, various services provided by Amazon web services.
- Q10. Explain in detail Cloud Security Alliance (CAS) Stack model.

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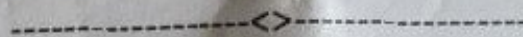
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(Cloud Computing, UBCATE – 601)

Section – C

Note: Attempt any two questions. Each question carries 15 marks.

- Q11. What is Virtualization? Explain the different types of virtualization in detail.
- Q12. What is the use of grid computing? How computing in grid architecture differs from cloud architecture? Explain.
- Q13. What are the advantages and disadvantages of Public, Private, Hybrid and Community Cloud Models?
- Q14. Write a brief overview of the following:
- a) Microsoft Azure
 - b) Google Cloud platform
 - c) VMware
- Q15. Discuss in detail the various levels of Security requirements in cloud.



B.A./B.Sc. VI Semester Examination**CBS-VI/6(R&P)****214912****MATHEMATICS****Course No. : UMTTE - 601***Time Allowed- 2½ Hours**Maximum Marks- 80*

Note: Section A : Attempt all question. Each question carries 04 marks.

Section B : Attempt all questions. Each question carries 08 marks.

Section C : Attempt any two questions. Each question carries 18 marks.

SECTION - A

Attempt all question. Each question carries 04 marks. (5×4=20)

1. Use the method of separation of symbols evaluate

$$\frac{\Delta^2 x^3}{E^2 x^3} \text{ and } \frac{\Delta^2}{E^2} x^3.$$

2. Prove $\Delta = \frac{1}{2} \delta^2 + \delta \sqrt{1 + \frac{1}{4} \delta^2}$.

3. Evaluate $1^p + 2^p + \dots + n^p$, where p is a positive integer.
4. Find the positive solution of $f(x) = x^3 + x - 1 = 0$ by iteration process.
5. Using Gauss's elimination method solve
- $$2x + 4y + z = 3$$
- $$3x + 2y - 2z = 2$$
- $$x - y + z = 6$$

SECTION - B

Attempt all questions. Each question carries 08 marks. (3×8=24)

6. Use the method of separation of symbols to prove

$$u_x - u_0 - u_1 + u_2 - \dots = \frac{1}{2}u_0 - \frac{1}{4}\Delta u_0 + \frac{1}{8}\Delta^2 u_0 - \frac{1}{16}\Delta^3 u_0 + \dots$$

7. Applying Bessel's formula to obtain y_{25} , given $y_{20} = 2854$, $y_{24} = 3162$, $y_{28} = 3544$, $y_{32} = 3992$.

8. Evaluate $\int_0^1 \frac{dx}{1+x^2}$ taking four equal parts and using Simpson's one-third rule. Hence obtain the approximate value of π .

SECTION - C

Attempt any two questions. Each question carries 18 marks.

(2×18=36)

9. Prove the Newton Formula for Forward interpolation and find u_{-1} , given $u_0 = 5, u_1 = 1, u_2 = 9, u_3 = 25, u_4 = 55$.

10. State and prove Stirling's interpolation formula and find y_{35} , given $y_{20} = 512, y_{30} = 439, y_{40} = 346, y_{50} = 243$.
11. Prove that

$$\int_{x_0}^{x_0+nh} y dx = \frac{h}{3} [y_0 + 2(y_2 + y_4 + \dots + y_{n-2}) + 4(y_1 + y_3 + \dots + y_{n-1}) + y_n].$$

12. Solve the following equations by Gauss - Jordan's Reduction method

$$10x + y + z = 12$$

$$x + 10y + z = 12$$

$$x + y + 10z = 12$$

$2y - 2z = 2$
 $2y - 2z = 2$
 2

$y_0 + 4y_1 + 2y_2$
 $2y - 2z = 2$