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FOURTH SEMESTER UNIVERSITY EXAMINATION, APRIL 2019



**ANDROID OPERATING SYSTEM**

Time: 03 HOURS

Maximum Marks: 70

**PART - A**

Answer any SEVEN of the following questions.

7×2=14

- List the programming rules.
- Define UI.
- What is Fragment?
- Define Action Bar.
- What is URI?
- What is Call log?
- Mention the significance of GPS?
- What do you mean by Proximity Sensor?
- What is Junit?
- Define DDMS.

**PART - B**

Answer any SEVEN of the following questions.

7×5=35

- Discuss the future of Android App Development?
- Explain the features of android OS.
- Describe Grid View with code snippet.
- What are permissions? Explain.
- Explain the procedure used to access data from a database in Android.
- How to access Media store programmatically for Videos.
- Write a program to display accelerometer sensor readings.
- Write the procedure to get current longitude and latitude using GPS.
- How is the mobile testing process carried out? Explain.
- Describe the procedure followed for Service testing.

**PART - C**

Answer any THREE of the following questions.

3×7=21

- Briefly explain the history of Mobile Application.
- What is Android? Explain its lifecycle with proper flowchart.
- Explain CRUD operation in Android with code snippet.
- Write a program to establish connection through Bluetooth and transfer a file.
- Explain the components of Android architecture with a neat diagram?

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**FOURTH SEMESTER UNIVERSITY EXAMINATION, APRIL 2019**  
**BASICS OF VIRTUALIZATION AND CLOUD TECHNOLOGY**

Maximum Marks: 70

Time: 03 HOURS

**PART - A**

7×2=14

1. Answer any **SEVEN** of the following questions.

- What is cloud computing?
- List any two obstacles of cloud technology.
- Define Para-Virtualization with an example.
- List the types of hardware assets
- Define VDI.
- Mention and define the types of hypervisors.
- Differentiate between Private and Public Cloud.
- What is hardware virtualization? Give an example.
- List out the services of cloud computing.
- What do you see as the current best practices for data centre virtualization?

**PART - B**

2. Answer any **SEVEN** of the following questions.

7×5=35

- Explain the Evolution of Cloud Computing.
- What are the essential characteristics of virtualization? Discuss
- Draw the Cloud Computing Reference Architecture and explain in detail.
- Write a note on virtualization storage.
- Define Interoperability, Portability and Integration.
- Explain hardware virtualization and its types.
- Explain the Cloud computing delivery models with examples.
- Write the vulnerabilities and challenges of Cloud Computing.
- Describe Cost Benefit Analysis in cloud computing.
- What are the best Practices used in selection of Cloud service and providers?

**PART - C**

3. Answer any **THREE** of the following questions.

3×7=21

- Explain in detail about Cloud Service Models with appropriate examples.
- List out and explain the different types of vSwitch connections to establish communication.
  - What is virtual hard disk? Explain its usages in different virtualized environment
  - Write short note on Cloud Service Providers and their Cloud Services.
- Write down the steps to install ESXi and to Create VM using ESXi Server and Assign permissions to the created users. List out and explain the available permissions for users.

"Virtualization is the wave of the future" Justify. Explicit the process of CPU, memory and I/O devices virtualization in data center.



## FOURTH SEMESTER UNIVERSITY EXAMINATION, APRIL 2019

## COMMUNICATIVE ENGLISH

03 HOURS

Maximum Marks: 70

## SECTION - A

Answer any ONE of the following.

1×10=10

- a. Write a dialogue for the following situation.

Sameer had to catch a train to go and attend an interview in Chandigarh. He reached the station late, due to a traffic jam on the road and so he could board the train without ticket as the train was about to leave. Develop a dialogue between Sameer and the ticket-examiner.

- b. Prepare a 10 minute speech for the given topic.

Female sports should be given equal coverage by the media.

Write an Appropriate response for any TWO of the following situations. 2×5=10

- a. You are a Customer Care Representative of OPPO Mobile Company. By mistake a defective cell phone is sold out from one of your stores. The customer who bought that defective piece has called in to complain. He says, "My cell phone won't turn on and I only bought it yesterday from one of your stores." How would you respond to this situation?
- b. You're working on a project with a tight deadline but you find that you're unable to complete your section because your co-workers are unavailable to answer a few key questions. You approach your supervisor seeking his help. What would you say?
- c. You have reasons to believe that a co-worker is preparing to divulge company secrets to a rival corporation. These secrets have the potential to really damage the company. How would you warn the co-worker not to divulge the secrets?
- d. You are a receptionist of Rescue Vehicle Service Pvt Ltd. You have received a call from a stranger. He requests, "I am on national highway 7 and my car has over heated and there is smoke coming out from the hood. Can you send a tow truck out to give me a hand?" The towing vehicle is unavailable that moment. What would be your response in this situation?

## SECTION - B

Complete the following passage using the appropriate words given below. 10×1=10

Childhood is a time when there are (a) \_\_\_\_\_ responsibilities to make life difficult. If a child (b) \_\_\_\_\_ good parents, he is fed, looked (c) \_\_\_\_\_ and loved, whatever he may do, it is improbable that he will ever again in his life (d) \_\_\_\_\_ given so much without having to do anything (e) \_\_\_\_\_ return. In addition, life is

always (f) \_\_\_\_\_ new things to the child. A child finds (g) \_\_\_\_\_ in playing in the rain or in the snow. His first visit (h) \_\_\_\_\_ the seaside is marvellous adventure. But a child has his pains; he is not free to do as he wishes; he is continually being (i) \_\_\_\_\_ not to do things or is being (j) \_\_\_\_\_. His life is therefore not perfectly happy.

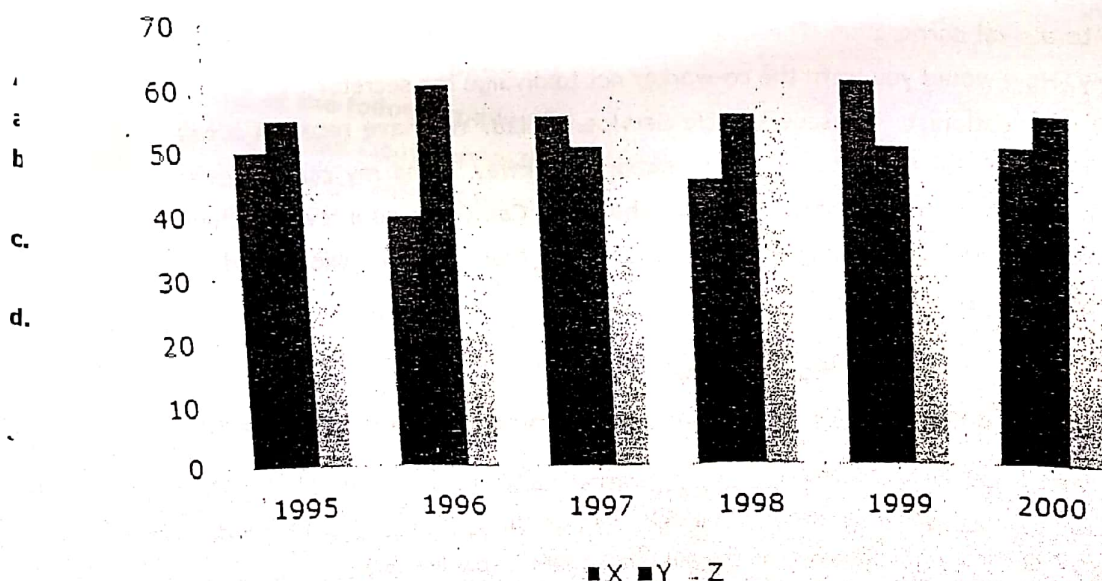
- |    |              |                 |                 |                 |
|----|--------------|-----------------|-----------------|-----------------|
| a. | (i) many     | (ii) little     | (iii) few       | (iv) more       |
| b. | (i) had      | (ii) have       | (iii) has       | (iv) will have  |
| c. | (i) up       | (ii) at         | (iii) after     | (iv) around     |
| d. | (i) is       | (ii) has        | (iii) are       | (iv) be         |
| e. | (i) for      | (ii) in         | (iii) as        | (iv) for        |
| f. | (i) donating | (ii) displaying | (iii) granting  | (iv) presenting |
| g. | (i) pain     | (ii) progress   | (iii) pressure  | (iv) pleasure   |
| h. | (i) on       | (ii) to         | (iii) in        | (iv) for        |
| i. | (i) ordered  | (ii) told       | (iii) forbidden | (iv) restricted |
| j. | (i) beaten   | (ii) penalised  | (iii) disturbed | (iv) punished   |

### SECTION - C

A soft drink company prepares drinks of three different flavors - X, Y and Z. The production of three flavors over a period of six years has been expressed in the bar graph provided below. Summarize the information by selecting and reporting the main features and make comparisons where relevant. (Word limit: 250 words)

1×5=5

Production of Three Different Flavors X, Y and Z by a Company over the years (in lakh bottles)





2. notes on the following passage and suggest a suitable title. .

1×10=10

Most all of us have suffered from a headache at some time or the other. For some a headache is a constant companion and life is a painful hell of wasted time.

The most important step to cope with headaches is to identify the type of headache one is suffering from. In tension headaches (two hand headache), a feeling of a tight band around the head exists along with the pain in the neck and shoulders. It usually follows activities such as long stretches of driving, typing or sitting on the desks. They are usually short lived but can also last for days or weeks.

A headache is usually caused due to the spinal misalignment of the head, due to the posture. Sleeping on the stomach with the head turned to one side and bending over positions for a long time make it worse.

In migraine headaches, the pains usually on one side of the head may be accompanied by nausea, vomiting irritability and bright spots or flashes of light. This headache becomes worse by activities especially like bending. The throbbing pain in the head worsens by noise and light. Certain triggers for migraines may be chocolate, caffeine, smoking or MSU in certain food items. The pain may last eight to twenty four hours and there may be a hangover for two or three days. Migraines are often produced by an 'aura'-----changes in sight and sensation. There is usually a family migraine.

In a headache, pain originates from the brain but from the irritated nerves of muscles, blood vessels and bones. These head pain signals to the brain which judges the degree of distress and relays it at appropriate sites. The pain sometimes may be referred to sights other than the problem areas. This is known as referred by pain and occurs due to sensation overload.

Factors causing headache are understood but it is known that a shift in the level of body hormones chemicals, certain foods and drinks and environmental stress can trigger them.

If the headache troubles you often, visit the doctor, who will take a full health history relating to diet, life stresses, the type of headache, triggering factors and relief measures. You may be asked to keep a 'headache diary' which tells you to list - the time headache started and when it ended, emotional environmental and food and drinking factors which may contribute to it. The type and severity of pain and the medications used which provide much relief are also to be listed.

This helps the doctor in determining the exact cause and type of headache and the remedy thereof.



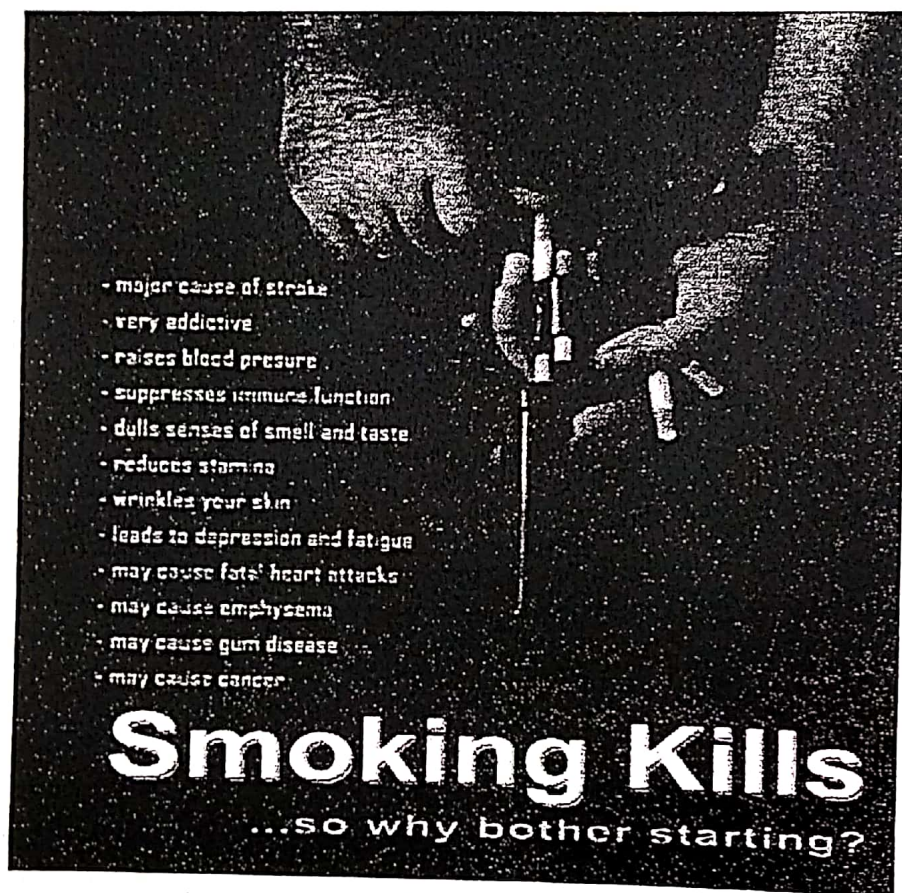
1×10=10

Answer any ONE of the following.

- a. Develop a caller card script for the following situation. It should include five scenes and at least five characters and dialogues:

Two criminals, Amit and Raghav, intend to kidnap Shekhar (10 years old), son of a prominent businessman and hold him for ransom. The moment they arrive at the house, their plan begins to unravel.

- b. Analyse following advertisement (word limit: 200 words).



## SECTION - D

You are a member of your residential society; draft an email to Mr Sharma, the Inspector of the local Police station, informing him about miscreants who ride their bikes rashly every evening outside your society.

1×5=5

Answer any ONE of the following.

1×10=10

- a. Tata India Private Ltd has advertised in 'Deccan Herald' that they require fresh graduates for the position of Marketing Executives and B. Com/ BMS graduates for Product sale. The candidate is required to possess high levels of interpersonal Skills. Shekhar has the required qualification and skills. Help him draft a resume.
- b. Sports should be made compulsory course of study in higher learning institutions. Write an essay expressing your opinion.



## FOURTH SEMESTER UNIVERSITY EXAMINATION, APRIL 2019

## ELEMENTS OF DISCRETE MATHEMATICS

03 HOURS

Maximum Marks:70

## PART - A

Answer any SEVEN of the following questions.

7×2=14

- a. What are Propositions give an example.
- b. Define Exclusive Disjunction [XOR] and write the truth table.
- c. What Is Quantified Statement give an example?
- d. Define Group Codes and give an example.
- e. Define product rule with an example.
- f. There are four bus routes between place A and B and three bus routes between place B and C find the number of ways a person can make a round trip from A to A w find the number of ways a person can make a round trip from A to A via B and C if he does not uses a bus more than 5 B and C if he does not used as a bus more than once.
- g. If  ${}^nP_2=132$ , find the value of  $n$ .
- h. If  $(2p, p+q) = (6,1)$  Find  $p$  &  $q$ .
- i. Define Group.
- j. Prove that "If  $g$  is generator of cyclic group  $G$ , then  $g^{-1}$  is also a generator of  $G$ "

## PART - B

Answer any SEVEN of the following questions.

7×5=35

- a. Given  $p$  is true &  $q$  is false find the truth value of the following:
  - i.  $\neg(p \wedge q) \vee \neg(q \leftrightarrow p)$
  - ii.  $(p \rightarrow q) \vee \neg(p \leftrightarrow \neg q)$
- b. Let  $p, q$  &  $r$  be the propositions having the truth values 0, 0, & 1 respectively. Find the truth values of the following compound propositions.
  - i.  $(p \vee q) \vee r$
  - ii.  $(p \wedge q) \wedge r$

iii.  $(p \wedge q) \rightarrow r$

iv.  $p \rightarrow (q \wedge r)$

v.  $p \rightarrow (q \rightarrow r)$

- c. Write the following Propositions in symbolic form, negate and simplify, express in words.

"If all triangles have three sides then some squares are rectangles".

- d. Illustrate sum rule and product rule with an example.

- e. Prove  $S(n): 2^n > n, \forall n \geq 1$ . by mathematical induction.

- f. Let  $A = \{1, 2, 3, 4, 5, 6\}$  and  $R$  be a relation defined by  $aRb$  iff "a is a multiple of b" then:

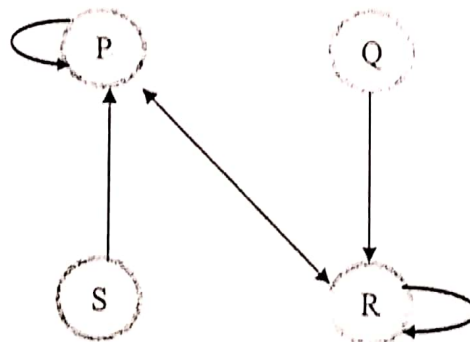
- i. Write  $R$  as ordered pair

- ii. Write matrix of relation

- iii. Draw digraph

- iv. Find indegree outdegree of all vertex

- g. Find Relation, Matrix of relation, Indegree, outdegree of the following digraph



- h. If  $r$  is a relation on  $A = \{1, 2, 3, 6, 9, 12, 18\}$  defined by  $xRy$  if  $x$  divides  $y$ . prove that  $(A, R)$  is a poset. Draw its Hasse diagram.
- i. Define cyclic groups. Consider the group  $U = \{1, 2, 4, 5, 7, 8\}$  under the binary operation multiplication. Check whether  $U$  is cyclic and find its generator if it is cyclic.
- j. Suppose the encoding function  $E: Z_2^m \rightarrow Z_2^{m+1}$  is defined as follows

$$E(w) = E(w_1 w_2 \dots w_m) = w_1 w_2 \dots w_m w_{m+1}$$

where



$$f(m+1) = f(x) = \begin{cases} 0, & \text{If } w \text{ contains even no. of 1's} \\ 1, & \text{If } w \text{ contains odd no. of 1's} \end{cases}$$

Find the code words assigned by E to the following message in  $Z_2^3$ .

000, 000, 011, 100, 110, 101, 111, 010

### PART – C

Answer any THREE of the following questions.

3×7=21

- a. Prove by mathematical Induction that  $1 + 2 + 3 + \dots + n = \frac{n(n+1)}{2}, \forall n \geq 1$ .
- b. Write the following quantified statement in symbolic form.
  - i. At least one integer is even
  - ii. Every integer is either even or odd but not both
  - iii. If  $x$  is odd or  $x$  is not divisible by 7 then  $x$  is divisible by 3
- c. There are 200 individuals with a skin disorder, 120 has been exposed to the chemical C1, 50 two chemical C2, and 30 to both the Chemicals C1 and C2. Find the number of individuals exposed to
  - i. chemical C1 but not chemical C2.
  - ii. chemical C2 but not chemical C1.
  - iii. chemical C1 or chemical C2.
- d. Prove that "In a group code, the minimum distance between distinct code words is the minimum of the weights of the nonzero elements of the code".
- e. State and Prove Lagrange's Theorem.

## FOURTH SEMESTER UNIVERSITY EXAMINATION, APRIL 2019

## ENTREPRENEURIAL DEVELOPMENT

Time: 03 HOURS

Maximum Marks:70

## PART - A

Answer any SEVEN of the following questions.

7×2=14

- Give any two differences between an Entrepreneur and Entrepreneurship.
- What is Entrepreneurial culture?
- What is FLO?
- Define Business Idea.
- What is environmental analysis?
- What do you mean by Business Planning Process?
- What is Technical Feasibility?
- What is Tax concession?
- Give the meaning of Subsidy.
- What are the internal causes of Industrial sickness?

## PART - B

Answer any SEVEN of the following questions.

7×5=35

- Discuss the various characteristics of an Entrepreneur.
- Discuss the attributes of an Entrepreneur.
- What are the steps involved in identifying business opportunity?
- Give an overview of Business Planning process.
- Explain Financial Feasibility.
- What are the functions of AWAKE?
- Explain the objectives of Industrial Estates.
- Why do Entrepreneurs fail? Give reasons.
- What are the benefits of E- Business?
- Explain viral marketing.

## PART - C

Answer any THREE of the following questions.

3×7=21

- Define Entrepreneurship. Explain the various features of Entrepreneurship.
- What do you mean by environmental analysis? What is search and scanning the environment?
- Explain the Role and Functions of District Industries Centre (DIC).
- Discuss the various functions of Small scale industries known as MSME development institute.
- Explain the various causes and consequences of Industrial Sickness.