

NO. OF QUESTIONS: 09

UG (NER) 3<sup>rd</sup> SEMESTER**Information Technology (Major)**

Time Allowed : 2 : 00 Hours

Max. Marks : 100

Min. Marks : 36

**NOTE:** ATTEMPT ALL QUESTIONS FROM SECTION "A" & "B" AND ONLY TWO QUESTIONS FROM SECTION "C"**Section - A: [Short Answer Type Questions]**

(8 x 2 = 16 Marks)

[Answer all Questions in maximum of 20 words each]

1.

- i. What do you understand by the term 'FOSS'? 2
- ii. Give examples of any three open-source softwares. 2
- iii. What is Drupal used for? 1
- iv. What is GCC? 2
- v. Who is the present CEO of GitHub Inc.?
- vi. Who is the founder of Wikipedia?
- vii. What does LAMP stand for?
- viii. What is FreeBSD used for?

8. → 14.

**Section - B: [Medium Answer Type Questions]**

(4 x 10 = 40 Marks)

[Answer all the Four Questions with internal choice in a maximum of 150 words each]

2. Compare and contrast Free source Vs Open-source software. 8

**"OR"**

What is the role of open-source software in government?

3. "In open-source community, collaboration is the key to success". Discuss. 6

**"OR"**

Discuss the various features of Apache web server?

4. What are the various ways of communicating on GitHub?

**"OR"**

- How can you contribute to Wikipedia?

5. Discuss in detail the containerization technologies. 6

**"OR"**

Discuss the features of any two open-source operating systems.

**Section - C: [Long Answer Type Questions]**

(2 x 22 = 44 Marks)

[Answer only Two Questions in a maximum of 400 words each]

6. Discuss the various principles and methodologies of open-source software that have reshaped the software landscape. 20
7. What is open-source hardware? How is open-source hardware licensed?
8. What is GitHub? Discuss its working in detail. 10
9. Discuss in detail the open-source database technologies.

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# Applied Computing (Minor)

Time Allowed : 2 : 00 Hours

Max. Marks : 100

Min. Marks : 36

**NOTE:** ATTEMPT ALL QUESTIONS FROM SECTION "A" & "B" AND ONLY TWO QUESTIONS FROM SECTION "C"

## Section - A: [Short Answer Type Questions]

[Answer all Questions in maximum of 20 words each]

(8 x 2 = 16 Marks)

1.
  - i. Draw the truth table and circuit diagram of XOR gate?
  - ii. What is the difference between unsigned and signed binary arithmetic?
  - iii. What are the two types of complement methods for binary numbers?
  - iv. State DeMorgan's Theorems?
  - v. What is a parity code and its purpose?
  - vi. Define SOP and POS forms?
  - vii. What is a register?
  - viii. What is Instruction Execution Cycle?

0. → 14

## Section - B: [Medium Answer Type Questions]

[Answer all the Four Questions with internal choice in a maximum of 150 words each]

(4 x 10 = 40 Marks)

2. Differentiate between a register and a counter?

"OR"

Design and draw the logic diagram of a half adder?

6.

3. Express the Boolean function  $F(A, B, C) = \sum(0, 2, 3, 4, 5, 7)$  in Sum of Products (SOP) form?

"OR"

Convert following numbers to the indicated bases:

- a.  $(227)_{10} = ( )_2$
- b.  $(AB)_{16} = ( )_2$

10.

4. Write the key differences between combinational and sequential circuits

"OR"

Explain 1's and 2's Complement of Binary Numbers with example?

4.

5. Explain the concept of microcontroller and system on chip (SoC)?

"OR"

What is a multiplexer and what is its importance? Draw the block diagram of a 4:1 multiplexer?

6.

## Section - C: [Long Answer Type Questions]

[Answer only Two Questions in a maximum of 400 words each]

(2 x 22 = 44 Marks)

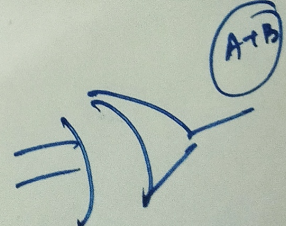
6. Explain the von Neumann architecture and its components. What are the functions of the CPU, memory, and I/O ports?
7. Explain the concept of number systems and their conversions. How can you convert a decimal number to a binary, octal, or hexadecimal number and vice versa?
8. Explain the difference between latch and flip-flop. Describe the operation of a D flip-flop and a JK flip-flop?
9. Minimize the following Boolean functions by means of a four-variable k-map:
  - a.  $F(A, B, C, D) = \sum m(2, 4, 8, 9, 10, 12, 13, 14)$
  - b.  $F(W, X, Y, Z) = \sum m(0, 1, 5, 6, 8, 10, 13, 14, 15)$

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$$\begin{array}{r} 227_{10} \\ \div 2 \\ \hline 113 \text{ R } 1 \\ 56 \text{ R } 1 \\ 28 \text{ R } 0 \\ 14 \text{ R } 0 \\ 7 \text{ R } 1 \\ 3 \text{ R } 1 \\ 1 \text{ R } 1 \end{array}$$

$$\begin{array}{r} 227_{10} \\ \div 16 \\ \hline 14 \text{ R } 3 \\ 3 \text{ R } 3 \end{array}$$

$$1 \times 2^7 + 0 \times 2^6 + 1 \times 2^5 + 0 \times 2^4 + 1 \times 2^3 + 0 \times 2^2 + 1 \times 2^1 + 1 \times 2^0$$



0421



**Managerial Skills (MDC)****Time Allowed : 2 : 00 Hours****NOTE:** ATTEMPT ALL QUESTIONS FROM SECTION "A" & "B" AND ONLY TWO QUESTIONS FROM SECTION "C"**Max. Marks : 75**  
**Min. Marks : 27****Section - A: [Short Answer Type Questions]**

(Answer all Questions in maximum of 20 words each)

(8 x 1.5 = 12 Marks)

- 11

1. What is meant by team? 1
- ii. What is learning through experiencing? 1
- iii. What are communication barriers? 1
- iv. What is motive? 1
- v. What is meant by group shift? 1
- vi. What is sensitivity training? 1
- vii. What is meant by role in an organisation? 1
- viii. What are effective managerial skills? 1

**Section - B: [Medium Answer Type Questions]**

(Answer all the Four Questions with internal choice in a maximum of 150 words each)

(4 x 7.5 = 30 Marks)

- 20

2. What are various managerial skills and what is their importance for the business organisation?

What is communication process? What is importance of effective communication skills? 5

3. What is brainstorming? How it is important tool for idea generation?

Why coordination is critical function in business organisations? Explain with suitable examples. 5

4. Explain interpersonal roles? What are three interpersonal roles explain with example. 5

Who are various leadership styles? What makes effective leader? 5

5. What types of skill should future managers have in order to resolve business challenges?

Why group cohesion is important element for group success? Explain with example. 5

**Section - C: [Long Answer Type Questions]**

(Answer only Two Questions in a maximum of 400 words each)

(2 x 16.5 = 33 Marks)

- 30

6. Coordination is the essence of management, explain with suitable example. 13
7. What is role of motivation in developing managers and what skills motivate employees? 26 → 28
8. What are team norms? How does the diversity of a group affect its performance? 13
9. What is communication and its types? What are challenges to effective communication? 13



# SEMESTER Language (AEC) (URM022A)

Allowed : 2 : 00 Hours

Max. Marks : 75  
Min. Marks : 27

ATTEMPT ALL QUESTIONS FROM SECTION "A" & "B" AND ONLY TWO QUESTIONS FROM SECTION "C"

Section - A: [Short Answer Type Questions]

(8 x 1.5 = 12 Marks)

1- حسد الہ سے کہتے ہیں؟

12 → 8.

علامت سوالیہ کی مختصر تعریف کریں؟

غیر رسمی خط کس سے کہتے ہیں؟

منکر اور مونث مثالوں سے واضح کریں؟

علامت فجائیہ کا استعمال تحریر میں کہاں ہوتا ہے؟

مضمون کے تین حصوں کے نام لکھیں؟

مترادفات الفاظ کن کو کہا جاتا ہے؟

مترادف زبان پر تین جملے لکھیں؟

## Section - B: [Medium Answer Type Questions]

[Answer all the Four Questions with internal choice in a maximum of 150 words each]

5

جملہ کی تعریف کرتے ہوئے اس کے اجزاء پر روشنی ڈالیں

"OR"

دفعہ کی خط کی وضاحت کیجیے

جملہ اسم اور جملہ فعلیہ کی تعریف

"OR"

واحد، جمع اور جمع الجمع مثالوں کے ساتھ واضح کریں

جس حقیقی اور جس غیر حقیقی پر ایک مثال نوٹ لکھیں

"OR"

حکاویہ نصیب الامثال اور مشابہ لفظوں کی وضاحت کیجیے

تکثرات کے لحاظ سے جملہ کے اقسام تفصیل سے بیان کریں

"OR"

مضمون نگاری میں تمہید اور نفس مضمون کی کیا اہمیت ہے

(2 x 16.5 = 33 Marks)

6- مضمون نگاری کی تعریف کرتے ہوئے اس کے اصول اور ادب لکھیں۔

7- مضمون نگار کے بارے میں تفصیلی جواب لکھیں۔ 10

8- خط کی تعریف اور اس کے اجزائے ترکیبی وضاحت سے تحریر کریں۔

9- اسانی سراج میں زبان کی اہمیت پر ایک مضمون لکھیں۔

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## Section - C: [Long Answer Type Questions]

[Answer only Two Questions in a maximum of 400 words each]

6- مضمون نگاری کی تعریف کرتے ہوئے اس کے اصول اور ادب لکھیں۔

7- مضمون نگار کے بارے میں تفصیلی جواب لکھیں۔ 10

8- خط کی تعریف اور اس کے اجزائے ترکیبی وضاحت سے تحریر کریں۔

9- اسانی سراج میں زبان کی اہمیت پر ایک مضمون لکھیں۔

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معنی

پڑھیں

فارسی  
اردی

2) Imper Numpy

asymptotic, asymptotic, asymptotic

1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

even - sum for even in



## Understanding India (VAC) (UIN022V)

Time Allowed : 2 : 00 Hours

NOTE: ATTEMPT ALL QUESTIONS FROM SECTION "A" & "B" AND ONLY TWO QUESTIONS FROM SECTION "C"  
Section - A: (Short Answer Type Questions)

(Answer all Questions in maximum of 20 words each)

1.

i. Define RIG VEDIC AGE? 1

ii. Who was SUMADRAGUPTA? 1

iii. Who was VARDAMAN MAHAVIRA? 1

iv. Who was RAJA RAJA CHOLA? 1

v. Define SUFFISM? 1

vi. What does the term DIKUS mean?

vii. What is ATWA NIRBAR BHARAT? 1

iii. Introduce ARYABHATTA as a mathematician. 1

Section - B: (Medium Answer Type Questions)

(Answer all the Four Questions with internal choice in a maximum of 150 words each)

2. Discuss the concept and evolution of BHARATVARSHA? 3

"OR"

3. Write a note on the emergence of VIJANAGAR Empire?

"OR"

4. What were the main teachings of BRAHMO SAMAJ? 3

5. What were the main causes of Revolt of 1857? 3

"OR"

What are the salient features of Indian Constitution?

6. What is the contribution of Indian's in Medical Sciences? 3

"OR"

What is the contribution of Indian's in the field of Mathematics and Astronomy?

Section - C: (Long Answer Type Questions)

(Answer only two Questions in a maximum of 400 words each)

6. Define Buddhism? What are its main teachings? 10

7. Introduce major SUFI SILSILAS of India? 4

8. Differentiate between Moderates and Extremists of Indian National Congress?

9. The Constitution of India is called a bag of borrowing. Discuss?

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(2 X 11 = 22 Marks)

(4 X 5 = 20 Marks)

Max. Marks : 50  
Min. Marks : 18

(8 X 1 = 08 Marks)

32 exp



# Health and Wellness (VAC)

Time Allowed: 2:00 Hours

NOTE: ATTEMPT ALL QUESTIONS FROM SECTION "A" & "B" AND ONLY TWO QUESTIONS FROM SECTION "C"

Section - A: [Short Answer Type Questions] (Answer all Questions in maximum of 20 words each) (8 X 1 = 08 Marks)

1. Define the term "wellness"? 6, 7
- ii. What is a balanced diet?
- iii. Define "stress"?
- iv. What is spirituality?
- v. Define yoga.
- vi. What is processed food?
- vii. Define the term "under nutrition".
- viii. Define posture.

## Section - B: [Medium Answer Type Questions]

(Answer all the Four Questions with internal choice in a maximum of 150 words each)

2. Elaborate the role of spirituality in maintaining good health? 4

(4 X 5 = 20 Marks)

3. What are different factors effecting health and wellness? 4

What is balanced diet? What are different components of balanced diet?

4. Write short note on "anxiety" and "depression". 4

Explain the role of sleep and rest in maintaining health?

5. What is physical fitness? What are types of physical fitness? 4

Elaborate different factors effecting mental health.

## Section - C: [Long Answer Type Questions]

(Answer only Two Questions in a maximum of 400 words each)

(2 X 11 = 22 Marks)

6. What do you mean by sedentary lifestyle? What are the risk factors associated with sedentary lifestyle? 10

7. Define health and wellness? Elaborate the importance of health and wellness education? 10

8. Define posture and postural deformities, Explain briefly different postural deformities and their corrective measures?

9. "Drug addiction is a curse" justify the statement.

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Max. Marks: 50  
Min. Marks: 18

(8 X 1 = 08 Marks)

(2) impor Numpy  
array (5,6)



