May- June-2023

Roll No. | | | | | | | | | | |

Total No. of Questions : 05

Total No. of Pages : 01

B.Voc. (Beauty Therapy and Aesthetics)/ B.A. (JAMC)/ BBA/(SIM)/ B.Com (Honours)/ BCA/ BHMCT (UGC)/ B.Sc. - Honours (Nutrition and Dietetics)/ B.Sc. (AI&ML)/ (Bio Technology)/ (Fashion Design)/ (Graphics & Web Designing)/ (IT)/(Medical Lab Sciences)/ BTTM (Sem-1)

ENGLISH

Subject Code : BTHU-103-18

M.Code : 75085

Date of Examination : 22-06-2023

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. All questions are COMPULSORY.
2. Q1, Q2 and Q3 carry TEN marks each.
3. Q4 and Q5 carry FIFTEEN marks each.

1. What is Communication? Explain in detail the types and modes of Communication.
2. How is Verbal communication different from non-verbal Communication? Discuss in detail the importance of non-verbal communication as a leader.
3. In FOUR sentences, summarise and paraphrase the following passage in an answer to the following question:

   How can smokers quit smoking? What steps can smokers follow to quit smoking?

   "No pain No gain". Quitting smoking needs a strong will and a lot of effort. Many smokers want to quit smoking. They know it is bad for their health. But it is difficult for them to do so. Doctors advise heavy smokers to reduce smoking gradually starting to cut down two to three cigarettes a day reaching the ultimate goal. Others find that chewing a gum keeps a smoker busy all day long and consequently, he can reduce the number of cigarettes consumed. Sports can improve the health and give smokers the strength to quit this bad habit. Some people go for group support where all smokers provide support for each other to quit smoking.
4. Write a letter to an applicant for the post of Chief Accountant to present himself for a personal interview.
5. You, as a marketing manager have been given the responsibility of conducting and preparing a market research to know the market potential of a new product which your company is intending to launch in the market in near future. Prepare a draft report.

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Roll No. [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ]

Total No. of Questions : 07 Total No. of Pages : 02

B.Sc. (IT)/ Graphics & Web Designing / BCA (Sem–1)

MATHEMATICS

Subject Code : UGCA-1901

M.Code : 76961

Time : 3 Hrs. Date of Examination : 17-06-2023 Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.**

SECTION-A

1. **Write briefly :**

   a) Set builder method

   b) Null set

   c) Disjunction

   d) Contradiction

   e) Diagonal matrix

   f) Arithmetic progression

   g) Geometric mean

   h) Show that $AUA^c = U$

   i) If $A = \begin{bmatrix} 2 & 5 \\ 1 & 3 \end{bmatrix}$, $B = \begin{bmatrix} 1 & -1 \\ -3 & 0 \end{bmatrix}$, find $5A - 3B$.

   j) Prove by an example that AB can be zero matrix when either of A and B is zero matrix.

(53)-2730

SECTION-B

2. a) Let $U=\{0,1,2,3,\ldots,9\}$, $A=\{x \in U: x \text{ is multiple of } 3\}$, $B=\{x \in U: x^2-5 \geq$ Determine

   i) $A \cap B$

   ii) $A \cup B$

   b) List all the members of the power set of the set $A=\{a,b,c,d\}$.

3. Prove $p \wedge (q \vee r) = (p \wedge q) \vee (p \wedge r)$

4. For what values of x, y, z, w

$$3\begin{bmatrix} x & y \\ z & w \end{bmatrix} = \begin{bmatrix} x & i \\ -1 & 2w \end{bmatrix} + \begin{bmatrix} 4 & x+y \\ z+w & 3 \end{bmatrix}$$

5. If $A = \begin{bmatrix} 1 & 0 & 2 \\ -1 & 2 & -3 \end{bmatrix}$, $B = \begin{bmatrix} 2 & 0 \\ 1 & -1 \\ 0 & -2 \end{bmatrix}$ verify that $(AB)' = B'A'$.

6. a) Prove that if a, b, c are in AP. then $a^2(b+c)$, $b^2(c+a)$, $c^2(a+b)$ are in AP

   b) Insert 5 AMs between 9 and 27.

7. a) The sum of three terms of a GP is 21 and their product is 216.Find the term

   b) Insert 5 GMs between 3 and 192.

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Roll No. [ ] Total No. of Pages : 02

Total No. of Questions : 07

BCA (Sem–1)

PROBLEM SOLVING USING C

Subject Code : UGCA-1903

M.Code : 76963

Date of Examination : 12-06-2023

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.**

SECTION-A

1. **Write briefly :**

   a) Differentiate between Keywords and Identifiers.

   b) What are Symbolic Constants? Explain.

   c) What is meant by pseudo code?

   d) List any two unformatted input output functions.

   e) Write the syntax of WHILE loop in C.

   f) What are static variables? Give example.

   g) List out various file operations in C.

   h) Differentiate between Arrays and Structures in C.

   i) Define the term functions in C.

   j) Explain in brief about String functions in C.

SECTION-B

2. What do you mean by Flowchart. Explain the different symbols used in a flowchart. How it differs from an Algorithm.

3. Explain the following operators with suitable examples :

   a) Arithmetic Operators

   b) Assignment and Conditional Operators

4. a) Write a C program to find sum of first ten natural numbers using FOR loop.

   b) What is meant by switch-case? Explain with the help of an example.

5. Explain the use of 'break' statement? Write a program to check whether a given number is prime using break statement?

6. **Explain the following concepts with suitable examples :**

   a) Structures and pointers.

   b) Passing structures to functions.

7. What is the difference between call by value and call by reference in relation to functions? Explain with the help of an example?

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BCA – Dec - 2022

Roll No. ☐☐☐☐☐☐☐☐☐☐ Total No. of Pages : 02

Total No. of Questions : 07

BCA (2019 Batch) (Sem.–1)

PROBLEM SOLVING USING C

Subject Code : UGCA-1903

M.Code : 76963

Date of Examination : 14-01-2023

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.

SECTION-A

1. **Write briefly :**

a) What do you mean by function prototype? How it is defined?

b) Compare local and global variables with example.

c) Explain the conditional operator with example.

d) Discuss structure of a C program.

e) What are header files? Why these are required? Give example.

f) What is the relationship between formal arguments and actual arguments?

g) What is a pointer? How a pointer variable is declared, initialized and accessed?

h) What are identifiers and keywords? Give example.

i) What is a constant? How it is declared and used?

j) Define Array? How 1-D and 2-D arrays are declared? Give example.

SECTION-B

2. a) Explain various data types of C with example. Give memory requirement of each.

   b) Define recursion. Write a recursive function to compute factorial of a given number.

3. a) Explain if-else, nested-if and switch statements of C with examples.

   b) Compare call by value and call by reference parameter passing with examples.

4. a) Draw a flow chart to print largest of 3 numbers.

   b) What are constants and variables? Discuss the rules how constants and variables are defined. Give examples.

5. a) Define string. Explain various operations which can be applied on strings with examples.

   b) What are two-dimensional arrays? How these are declared? Write a program to add two matrices.

6. a) What are pointers arrays? How you can declare and access 1-D and 2-D array elements using pointers? Discuss with examples.

   b) Write a program using pointers to find largest element of the array.

7. a) Write a program to design a structure for 30 students of a class with Roll No, Name and Marks. Find the average marks of the class.

   b) Explain various file operations available in C with examples.

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(S3)-2418

Dec – 2025 – Exam

Dec- 2022

Roll No. | | | | | | | | | | | Total No. of Pages : 02

Total No. of Questions : 07

BCA / DCA / B.Sc.(IT) (Sem.–1)

MATHEMATICS – I

Subject Code : BSIT/BSBC-103

M.Code : 10045

Date of Examination : 14-01-2023

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.

SECTION-A

1. **Write briefly:**

a) Explain with illustration :

i) Symmetric Matrix ii) Skew symmetric Matrix

iii) Transpose of a Matrix iv) Unitary Matrix

b) Let A = {1, 2, 3, 4, 5, 6} B = {2, 4, 6, 8} then show that A \ B ≠ B \ A.

c) Define Recurrence relation with example.

d) Solve $S(k) - 2S(k-1) + S(k-2) = 0$ where $S(0) = 1$, $S(1) = 2$.

e) If p stands for the statement, "I do not like coffee" and q stands for the statement, "I like tea". Then what does $\sim p \wedge q$ stands for ?

f) Show that maximum number of edges in a single graph with h vertices is $\frac{n(n+1)}{2}$.

g) Find all the partitions for set A = {a, b, c}.

h) Explain the concept of propositions over a universe.

i) Find X and Y if $X + Y = \begin{bmatrix} 7 & -2 \\ 2 & 6 \end{bmatrix}$

$$X - Y = \begin{bmatrix} 3 & 0 \\ 2 & 3 \end{bmatrix}$$

j) Define sample and multigraph with an example.

(53)-2399

SECTION – B

2. a) A college awarded 38 medals in Foot-ball, 15 in basket ball and 20 medals in cricket. If there medals went to a total of 58 men and only three men got medals in all the three sports, how many received medal in exactly two of the three sports?

b) Let A = {x : x is multiple of 2, x ∈ N}

B = {x : x is multiple of 5, x ∈ N}

C = {x : x is multiple of 10, x ∈ N}

Then find A ∪ (B ∩ C), (A ∩ B) ∩ C, A ∪ (B ∪ C).

3. a) Test the validity of :

Unless we control population, all advances resulting from planning will be nullified bu this must not be allowed to happen. Therefore we must somehow control population.

b) Prove that $[(p \to q) \times (q \to r)] \Rightarrow (p \to r)$ is a tautology.

4. a) If $A = \begin{bmatrix} 0 & 1 & 2 \\ 2 & 3 & 4 \\ 4 & 5 & 6 \end{bmatrix}$ and $k_1 = 1$, $k_2 = 2$ then verify that $(k_1 + k_2)A = k_1A + k_2A$.

b) If $A = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ a & b & -1 \end{bmatrix}$ then determine A^2.

5. Prove that an undirected graph possesses a Eulerian circuit if and only if it is conn and has its vertices of even degree.

6. a) Prove that associativity holds over conjunction by using propositional calculus.

b) Solve $S(k) - 7s(k-1) + 10\,S(k-2) = 6 + 8k$ with $S(0) = 1$ and $S(1) = 2$.

7. Use the principle of mathematical Induction to prove that

$1.3 + 2.4 + 3.5 + \ldots + n(n+2) = \frac{n(n+1)(2n+7)}{6}$ for any natural number n.

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Dec - 2022

Roll No. ☐☐☐☐☐☐☐☐☐☐ Total No. of Pages : 02

Total No. of Questions : 07

B.Sc. (IT / Graphics & Web Designing) / BCA (Sem.–1)

MATHEMATICS

Subject Code : UGCA-1901

M.Code : 76961

Date of Examination : 10-01-2023

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.

SECTION-A

1. **Write briefly :**

a) Define Power Set with an illustration.

b) What are tautologies, contradiction and contingent statements in algebra of logic?

c) Define Conjunction, Disjunction, Conditional Operator and Bi-Conditional Operator.

d) Define Addition and Multiplication of matrices with an example.

e) Which term in the A.P. 5, 2, –1, ... is – 22?

f) If 1/ b+c, 1/c+a, 1/a+b are inn A.P. then prove that a^2, b^2, c^2 are in A.P.

g) In a G.P., the third term is 24 and sixth term is 192. Find the tenth term.

h) If A, B are any sets, then $A \cap B = B$ if $B \subset A$.

i) State De-Morgan's Law for difference of sets.

j) Define tautology with an example.

(S3)-2231

SECTION-B

2. a) For given $A = \begin{bmatrix} 2 & -1 \\ -1 & 2 \end{bmatrix}$ and $B = \begin{bmatrix} 1 & 4 \\ -1 & 1 \end{bmatrix}$, is the following statement true or false $(A + B)^2 = A^2 + B^2 + 2AB$.

b) Find the values of x, y, z and w for given $3\begin{bmatrix} x & y \\ z & w \end{bmatrix} = \begin{bmatrix} x & 6 \\ -1 & 2w \end{bmatrix} + \begin{bmatrix} 4 & x+y \\ z+w & 3 \end{bmatrix}$.

3. a) Out of 400 boys of a school, 112 played cricket, 120 played hockey and 168 played football of these 32 played both football and hockey, 40 played cricket and football, 20 played cricket and hockey, 12 played all the three games. How many boys did not play any game and how many play only one game?

b) State and Prove De-Morgan's law of sets.

4. a) Find the value of a_7 from the recurrence relation with $a_n = 2\,a_{(n-1)} + 3$ with $a_0 = 6$

b) If a, b, c are in A.P. and b, c, d are in G.P. and $1/c$, $1/d$, $1/e$ are in A.P. Prove that a, c, e are in G.P.

5. a) If $A = \begin{pmatrix} 2 \\ -4 \\ 5 \end{pmatrix}$ and B = (6 3 –1) then verify that $(AB)' = B'A'$

b) If $A = \begin{pmatrix} 3 & 2 & 5 \\ 4 & 1 & 3 \\ 0 & 6 & 7 \end{pmatrix}$ Express A as the sum of two matrices such that one is symmetric and other is skew – symmetric.

a) If $A = \begin{pmatrix} 1 & 3 & 2 \\ 0 & 5 & 7 \\ 6 & 4 & 8 \end{pmatrix}$ find the value of $A^2 + 7A + 3I$ here I denotes identity matrix.

b) Prove that it is $A \subset B$ if and only if $B^c \subset A^c$ where c denotes complement of set.

a) Prove that $(p \wedge q) \wedge \sim (p \vee q)$ is a fallacy.

b) Check the validity of the argument :

If I work, I cannot study. Either I work or pass mathematics. I passed mathematics. Therefore, I study.

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(S4)-2251

Dec-2022-New

Roll No. [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ][ ] Total No. of Pages : 04

Total No. of Questions : 11

B.Voc. (Child Caregiver) / B.A.(JAMC) / BBA / BBA (Business Economics) / BBA (Event Management) / BBA (Rural Development) / BBA (SIM) / B.Com (Hons) / BCA / BHMCT / B.Sc. Hons. (Microbiology / Nutrition and Ditetics / Artificial Intelligence & Machine Learning / Bio Technology / Environment Science / Fashion Design / Graphics & Web Designing / Information Technology / Medical Lab Sciences / Operation Theatre Technology / Radiotherapy Technology / Bachelor of Tourism and Travel Management) (Sem.–1)

HUMAN VALUES, DE-ADDICTION & TRAFFIC RULES

Subject Code : HVPE-101-18

M.Code : 93322

Date of Examination : 21-01-23

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is compulsory.
2. SECTION-B contains FIVE questions. Each question carry FOUR marks. Attempt All.
3. SECTION-C contains FIVE questions with internal choice. Each question carry SIX marks. Attempt All.

SECTION-A

(10 × 1 = 10)

1. Fill in the Blanks/True/False :

a. Physical facilities are necessary but ..... for humans.
भौतिक सुविधाएं मनुष्य के लिए आवश्यक हैं, लेकिन ..... हैं।
ਭੌਤਿਕ ਸਹੂਲਤਾਂ ਮਨੁੱਖ ਲਈ ਜ਼ਰੂਰੀ ਹਨ, ਲੇਕਿਨ ..... ਹਨ।

b. Animal order in nature contains ..... and .....
प्रकृति में पशु आदेश में ..... और ..... होता है।
ਕੁਦਰਤ ਵਿੱਚ ਪਸ਼ੂ ਆਦੇਸ਼ ਵਿੱਚ ..... ਅਤੇ ..... ਹੁੰਦਾ ਹੈ।

c. Self-exploration is the process for ..... Education.
आत्म–अध्ययन ..... शिक्षा के लिए प्रक्रिया है।
ਸਵੈ–ਅਧਿਐਨ ..... ਸਿੱਖਿਆ ਲਈ ਪ੍ਰਕਿਰਿਆ ਹੈ।

d. To be in a state of liking is .....
पसंद के हिसाब से एक अवस्था में होना ..... है।
ਪਸੰਦ ਦੇ ਹਿਸਾਬ ਵਲੋਂ ਇੱਕ ਦਸ਼ਾ ਵਿੱਚ ਹੋਣਾ ..... ਹੈ।

e. Right understanding + ... = Mutual prosperity.
सही समझ + ... = पारस्परिक समृद्धि।
ਠੀਕ ਸਮਝ + ... = ਆਪਸੀ ਖੁਸ਼ਹਾਲੀ।

Dec-2022

f. Existence is nature submerged in space.
अस्तित्व अंतरिक्ष में डूबी हुई प्रकृति है।
ਅਸਤਿਤਵ ਅੰਤਰਿਖ ਵਿੱਚ ਸਮਾਈ ਹੋਈ ਕੁਦਰਤ ਹੈ।

g. There is no self-regulation in Nature.
प्रकृति में कोई आत्म–नियमन नहीं है।
ਕੁਦਰਤ ਵਿੱਚ ਕੋਈ ਆਤਮ–ਨਿਯਮਤਾ ਨਹੀਂ ਹੈ।

h. Developing ethical competence in individual ensures professional ethics.
व्यक्ति में नैतिक क्षमता का विकास पेशेवर नैतिकता सुनिश्चित करता है।
ਵਿਅਕਤੀ ਵਿੱਚ ਨੈਤਿਕ ਸਮਰੱਥਾ ਦਾ ਵਿਕਾਸ ਪੇਸ਼ੇਵਰ ਨੈਤਿਕਤਾ ਪੱਕੀ ਕਰਦਾ ਹੈ।

i. Holistic technologies should be eco-friendly and people-friendly.
समग्र प्रौद्योगिकियों पर्यावरण के अनुकूल और लोगों के अनुकूल होना चाहिए।
ਸਰਬਾਂਗੀ ਤਕਨੀਕਾਂ ਪਰਿਆਵਰਣ ਦੇ ਅਨੁਕੂਲ ਅਤੇ ਲੋਕਾਂ ਦੇ ਅਨੁਕੂਲ ਹੋਣੀਆਂ ਚਾਹੀਦੀਆਂ ਹਨ।

j. The value "care" is related with body.
मूल्य "ध्यान" शरीर के साथ संबंधित है।
ਮੁੱਲ ਧਿਆਨ ਸਰੀਰ ਦੇ ਨਾਲ ਸੰਬੰਧਤ ਹੈ।

SECTION-B

(5 × 4 = 20)

2. What are the basic guidelines of value education?
मूल्य शिक्षा की बुनियादी दिशा–निर्देश क्या हैं?
ਮੁੱਲ ਸਿੱਖਿਆ ਦੇ ਬੁਨਿਆਦੀ ਦਿਸ਼ਾ–ਨਿਰਦੇਸ਼ ਕੀ ਹਨ?

3. Explain harmony in family.
परिवार में तालमेल के बारे में बताएं।
ਪਰਿਵਾਰ ਵਿੱਚ ਤਾਲਮੇਲ ਦੇ ਬਾਰੇ ਵਿੱਚ ਦੱਸੋ।

4. Differentiate between intention and competence. How do we come to confuse between the two?
इरादे और क्षमता के बीच क्या अंतर है? कैसे हम गलती करते हैं?
ਇਰਾਦੇ ਅਤੇ ਕਾਬਲੀਅਤ ਦੇ ਵਿੱਚ ਕੀ ਅੰਤਰ ਹੈ? ਕਿਵੇਂ ਅਸੀਂ ਗਲਤੀ ਕਰਦੇ ਹਾਂ?

5. Explain competence in Professional-Ethics.
पेशेवर नैतिकता में क्षमता समझाओ।
ਪੇਸ਼ੇਵਰ ਨੈਤਿਕਤਾ ਵਿੱਚ ਸਮਰੱਥਾ ਸਮਝਾਓ।

Dec-2022-New

May-June-2023

Roll No. [ ] Total No. of Pages : 02

Total No. of Questions : 07

BCA (Sem–2)

ENVIRONMENTAL STUDIES

Subject Code : EVS-102-18

M.Code : 77421

Date of Examination: 30-05-2023

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.

SECTION-A

1. Write Briefly :

a) What is hurricane?

b) Name sources of Acid Rain.

c) What is Bio-sphere?

d) Name two major air pollutants.

e) What is an Eco-Mark?

f) What is sustainable development?

g) Name two ACTS in reference to environmental science.

h) Define Soil pollution.

i) Define Ozone Layer.

j) What is Population Explosion?

SECTION-B

2. Explain the role of awareness of students & teachers to tackle various environmental issues.

3. What are Alternate Energy Resources? Discuss.

4. Explain the types of Ecological succession.

5. What is an Earthquake? What are the causes of earthquakes?

6. What is Rain water harvesting? What are its advantages?

7. What are 'Hot spots of Bio-diversity'? Name the hotspots of our country.

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Roll No. [ ][ ][ ][ ][ ][ ][ ][ ][ ][ ] Total No. of Pages : 02

Total No. of Questions : 07

BCA (Sem–2)

COMPUTER SYSTEM ARCHITECTURE

Subject Code : UGCA-1908

M.Code : 77416

Date of Examination : 02-06-2023

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.

SECTION-A

1. **Answer very briefly :**

   a) Define a NOT and NAND gate using diagram.

   b) What is a K-Map and write its use in boolean algebra.

   c) Mention any two benefits of demultiplexer.

   d) Show a parallel binary adder using a circuit diagram.

   e) What is encoding and decoding?

   f) How can we remove a race around condition?

   g) Mention the features of RISC architecture.

   h) Name the types of buses used in computer system architecture.

   i) Why is D-Flip flop used?

   j) What is the need of a register in computer system architecture?

SECTION-B

2. Explain the Logic Gates : XOR, XNOR, NAND and NOR with neat diagram for each.

3. Compare the execution of half adder/subtractor with a full-adder/subtractor.

4. Simplify the expression using K-maps : $F(A,B,C) = \sum(1,3,5,6,7)$.

5. Show the logic diagram and explain J-K flip-flop and R-S flip-flop.

6. Explain in detail the Von Neumann architecture.

7. Describe the data movement among registers using bus in a 16-bit common bus system.

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Total No. of Questions : 07 Total No. of Pages : 02

BCA (Sem–2)

COMPUTER SYSTEM ARCHITECTURE

Subject Code : UGCA-1908

M.Code : 77416

Date of Examination : 02-06-2023

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.

SECTION-A

1. **Answer very briefly :**

a) Define a NOT and NAND gate using diagram.

b) What is a K-Map and write its use in boolean algebra.

c) Mention any two benefits of demultiplexer.

d) Show a parallel binary adder using a circuit diagram.

e) What is encoding and decoding?

f) How can we remove a race around condition?

g) Mention the features of RISC architecture.

h) Name the types of buses used in computer system architecture.

i) Why is D-Flip flop used?

j) What is the need of a register in computer system architecture?

SECTION-B

2. Explain the Logic Gates : XOR, XNOR, NAND and NOR with neat diagram for each.
3. Compare the execution of half adder/subtractor with a full-adder/subtractor.
4. Simplify the expression using K-maps : $F(A,B,C) = \sum(1,3,5,6,7)$.
5. Show the logic diagram and explain J-K flip-flop and R-S flip-flop.
6. Explain in detail the Von Neumann architecture.
7. Describe the data movement among registers using bus in a 16-bit common bus system.

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Total No. of Questions : 07

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BCA (Sem–2)

OBJECT ORIENTED PROGRAMMING USING C++

Subject Code : UGCA-1909

M.Code : 77417

Date of Examination : 05-06-2023

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.**

SECTION-A

1. **Write Briefly :**

   a) Explain with suitable example, syntax of for loop in C++.

   b) Define member functions.

   c) What is late binding?

   d) What is the need of overloading operators and functions?

   e) Explain data abstraction and encapsulation.

   f) What is class and instance?

   g) Write difference between object and classes.

   h) Write an example of multiple inheritance.

   i) How to open a file?

   j) State use of new operator.

SECTION-B

2. a) Write down the example to overload unary and binary operators in C++.

   b) Explain use of pointer in C++.

3. Compare procedural programming with object oriented programming for what type of application is the procedural programming is suitable and for what type OOP is suitable? Justify your answer.

4. Explain public, private and protected access specifiers and show their visibility when they are inherited as public, private and protected.

5. Illustrate the concept of inheritance by defining three classes student, exam and result, where result is inherited from exam and exam is inherited from student. Write possible constructors to initialize the values. Write a main function to test the constructor execution by creating objects.

6. What does Overloading means in C++? What are different forms of overloading? Give an example of each.

7. What are various types of files? What are the various modes in which a file can be opened? Explain by giving examples.

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Total No. of Questions : 07

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BCA (Sem.–2)

FUNDAMENTALS OF STATISTICS

Subject Code : UGCA-1907

M.Code : 77415

Date of Examination : 07-06-2023

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.**

SECTION-A

1. **Write briefly :**

   a) Statistics

   b) Primary and Secondary data

   c) Ogive

   d) Objectives of classification

   e) Rounding off data

   f) Discrete Frequency Sistribution

   g) Mean deviation

   h) Range and its Coefficient

   i) Harmonic mean

   j) Median.

SECTION-B

2. Discuss the functions and importance of statistics

3. What are the different methods of collecting data? Explain briefly the various sources of collecting secondary data.

4. What are the components of a statistical table? State the general rules for the construction of a table.

5. Calculate Mean and Mode from the following data :

Marks: Below	20	30	40	50	60	70	80	90
No. of students:	4	16	56	97	124	137	146	150

6. Prices of a particular commodity n five years in two cities are given below :

Price in City A:	20	22	19	23	16
Price in City B:	10	20	18	12	15

From the above data find which city had more stable prices.

7. a) Following is the data about the market share of four brands of TV sets sold in Jalandhar. Present the data by a pie diagram :

Brands of TV sets	Samsung	LG	Onida	Sony
Units sold in Jalandhar	480	360	240	120

b) Draw less than type Ogive for the following data :

Weight (in kgs)	40-45	45-50	50-55	55-60	60-65	65-70	70-75
No. of students	3	5	9	12	5	4	2

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BCA (Sem–3)

COMPUTER NETWORKS

Subject Code : UGCA-1913

M.Code : 78179

Date of Examination : 21-06-2023

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.**

SECTION-A

1. Write briefly :

a) Compare parallel and serial transmission.

b) What is half duplex in communication?

c) Differentiate between LAN and WAN.

d) Give an example of cloud.

e) Define Distortion.

f) Write the use of SLIP protocol.

g) Discuss CSMA/CD.

h) Write any one application of shortest path routing.

i) Discuss Leaky bucket algorithm.

j) Compare OSI reference model with TCP/IP model.

SECTION-B

2. Explain different topologies in networks. Which is the best network topology?

3. a) Compare message switching and packet switching.

   b) What is the use of Multiplexing? Compare FDM with TDM.

4. What is wireless transmission? Explain the functioning of different transmission methods.

5. What are the services provided by data link layer? How error can be detected and corrected during data transmission?

6. Explain the IEEE Ethernet standards used in computer networks with their working.

7. Write the functioning of Network Layer. Explain the use of Cryptography.

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BCA (Sem–3)

PC ASSEMBLY & TROUBLESHOOTING

Subject Code : UGCA-1919

M.Code : 78185

Date of Examination : 10-06-2023

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.

SECTION-A

1. **Write briefly :**

   a) Computer basic hardware.

   b) Peripheral Devices.

   c) Dot Matrix vs. Inkjet Printer.

   d) Microcomputer Software Requirement.

   e) LAN Printer.

   f) Scanner.

   g) [illegible]TOS.

SECTION-B

2. What is Computer and its different components and their operations?

3. What is processor? What are the different steps to replace and install new processor? Also discuss Dos and Don'ts during the replacement process.

4. What is the use of motherboards in PC and its types? What are the different steps to replace and install new motherboard?

5. What is the difference between primary and secondary memory? What are the different problems with memory and their troubleshooting?

6. What is booting and its types? How trouble shoot failed boot before the OS load?

7. What are the different peripheral devices? How to connect it with a computer?

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Total No. of Questions : 07

Total No. of Pages : 02

BCA/B.Sc. (IT) (Sem–3)

PROGRAMMING IN PYTHON

Subject Code : UGCA-1914

M.Code : 78180

Date of Examination : 01-06-2023

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.**

SECTION-A

1. **Write Briefly :**

   a) How is class instantiation done in Python?

   b) What are the various types of files supported by Python?

   c) What are docstrings?

   d) Explain the utility of default arguments.

   e) Explain the use of return statement.

   f) Can a function call another function? Give example.

   g) Write a program to find whether a given number is even or odd using if-else statement.

   h) Write a program to extract a substring from an input string.

   i) Differentiate between = and ==.

   j) What are identifiers? List the rules to name an identifier.

SECTION-B

2. Discuss the history and origin of Python language. List the limitations of Python. Also, write about the major applications of Python.

3. Write a detailed note on operators and expressions in Python. Write about precedence and associativity of operators.

4. Write down the properties of lists. Discuss different ways in which lists can be created. With the help of an example explain the concept of nested lists.

5. What are modules? How do you use them in Python programs? What are packages in Python?

6. Explain any three built-in exceptions with relevant examples. How are user-defined exceptions created in Python?

7. Write a detailed note on garbage collection. What is the need of destroying objects?

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Total No. of Questions : 07

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BCA (Sem–4)

DATABASE MANAGEMENT SYSTEMS

Subject Code : UGCA1922

M.Code : 79726

Date of Examination : 21-06-2023

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.**

SECTION-A

1. **Write briefly :**

   a) Why is the use of DBMS recommended? Explain by listing some of its major advantages.

   b) What is the purpose of SQL?

   c) Explain the concept of ACID properties in DBMS.

   d) What is the different type of relationships in the DBMS?

   e) What is BCNF?

   f) What is DBMS?

   g) Do we consider NULL values the same as that of blank space or zero?

   h) What is distributed database?

   i) How database triggers are used?

   j) Explain the terms specialization and generalization.

SECTION-B

2. What is the purpose of normalization in DBMS? How BCNF is different from 3NF? Explain with example.

3. What are the different types of keys in the database? Out of these keys which one are used in normalization. Explain any two normal forms using keys.

4. **Consider the Sailors-Boats-Reserves Database given below with name and fields:**

   s (sid, sname, rating, age)

   b (bid, bname, color)

   r (sid, bid, date)

   Write each of the following queries in SQL along with the explanation for each.

   a) Find all sailor id's of sailors who have a rating of at least 8 or reserved boat with id 103.

   b) Find the sailor id's of sailors with age over 20 who have not reserved a boat whose name includes the string "thunder".

   c) Find the sailor id's of sailors whose rating is better than some sailor called Bob.

   d) Find the colors of boats reserved by Albert.

5. Consider Dean Academic Affairs (DAA) office of your institute that maintains data about the following entities: (a) courses, including number, title, credits, syllabus and prerequisites; (b) course offerings, including course number, year, semester, section number, instructor(s), timings and classroom; (c) students, including student-id, name and program and (d) instructors, including identification number, name, department and title. Further, the enrolement of students in courses and grades awarded to students in each course they are enrolled for must be appropriately modelled. Construct an E-R diagram for the DAA office. Document all assumptions that you make about the mapping constraints. Can we have a weak entity in the given scenario?

6. What is concurrency management? Explain 2PL in detail.

7. Explain join dependency and how they are maintained?

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BCA / B.Sc. (Information Technology) (Sem–4)

WEB DESIGNING

Subject Code : UGCA1927

M.Code : 79731

Date of Examination : 19-06-2023

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.**

SECTION-A

1. **What will the output of following code segment be?**

   a. What is hypertext?

   b. How do you change text style in HTML?

   c. What do you mean by ordered list?

   d. What is the purpose of the colspan attribute of the <th> tag?

   e. Which tag is used to define a link?

   f. What is external document reference?

   g. What does the src attribute of <frame> specify?

   h. What is reset button?

   i. What do you mean by user defined object?

   j. What is String object?

SECTION-B

2. Create an HTML document to describe an unordered list of at least four states. Each element of the list must have a nested list of at least three cities in the state.

3. What is the purpose of cascading style sheets? Explain in detail.

4. Explain five basic formatting tags used to design an HTML document.

5. Create and test an HTML document that contains at least three lines of text. First line of the text must be green, second line must be blue and every noun must be yellow.

6. **Write a JavaScript for the following :**

   a. To reverse a string.

   b. To find the factorial of a given number.

7. **Create an HTML document that has a form with the following widgets :**

   a. A text widget to collect the user's name

   b. A collection of three radio buttons that are labeled as follows :

      i. Visa

      ii. Mastercard

      iii. Discover.

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BCA (Sem–4)

SOFTWARE ENGINEERING

Subject Code : UGCA1921

M.Code : 79725

Date of Examination : 15-06-2023

Max. Marks : 60

Time : 3 Hrs.

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.

SECTION-A

1. Write briefly :

a) What is software? Explain with an example.

b) What is SRS and why it is used?

c) What is testing and when it is used?

d) What are the metrics used for software testing?

e) How decision tree is used in software engineering?

f) What are characteristics of a good software design?

g) How software cost estimation is done?

h) What is software maintenance?

i) Which metric is used for design model?

j) Define Software Engineering.

SECTION-B

2. In 2017, a well-known organization 'A' is planning to develop a large product 'B'. Product 'B' would be comparable to a well-known Product 'C' but would be targeted to Operating system 'D'. At this time, no other vendor is planning to develop such product for operating system 'D'. What life cycle model would you use? Briefly justify you answer and also explain the model.

3. Discuss various metrics that are used for maintenance, give example.

4. Consider two components A and B. Two software engineers, Laurel and Hardy, measure the dependences between A and B. Laurel uses these dependences when computing cohesion, and Hardy uses these dependences when computing coupling. Laurel is considering a larger module C that contains both A and B as implementation details. Hardy is considering the implementaion of C, and thinking of A and B as modules. Out of Laurel and Hardy who is performing a sensible and useful computations and why?

5. What is software testing? Discuss the role of software testing during software life cycle and why is it so difficult?

6. What is the difference between White and Black Box testing? Discuss with an example.

7. a) What is software cost estimation and how it is measured. Give example to support your answer.

   b) What are properties of a good SRS. Give example to support your answer.

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BCA (Sem.–5)

PROGRAMMING IN PHP

Subject Code : UGCA-1929

M.Code : 90312

Date of Examination: 26-05-2023

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.**

SECTION-A

1. **Write briefly :**

   a) Which Tag is used to embed PHP in HTML program?

   b) What is the basic syntax of PHP Program?

   c) What is the Use of Hidden Field?

   d) Define Dynamic Function.

   e) How we can compare two strings in PHP?

   f) Define Array.

   g) What is the need of MySQL?

   h) Define DML.

   i) What is the need of POST method?

   j) Write syntax of foreach() loop.

SECTION-B

2. Explain various types of data types we can use in PHP and how we can change data type with Set type?

3. Explain various string functions and write a program to check the input string is palindrome or not.

4. Explain various types of arrays and write a program to find greatest element from an array.

5. Explain various File handling functions of PHP & Write a program to copy one file into another.

6. Write a code in PHP to input Name, Roll no, Marks in the MySQL table. And also explain the steps to connect MySQL database with PHP program.

7. Discuss the basic concepts of graphics and write a program in PHP to draw Line, Rectangle, Arc and Polygon.

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BCA (Sem.–5)

COMPUTER GRAPHICS

Subject Code : UGCA-1934

M.Code : 90317

Date of Examination : 24-05-2023

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.

SECTION-A

1. Write briefly:

a) What are the advantages and disadvantages of touch screen input devices?

b) How do virtual reality environments affect user perception and interaction with digital content?

c) How does anti-aliasing improve the quality of scan-converted circles?

d) What is the purpose of clipping in computer graphics and what are the common types of clipping?

e) What is the difference between affine and projective transformations in 3D graphics?

f) What are some of the challenges in implementing parallel projection in real-time app-lications?

g) How do algorithms for ellipse drawing differ from those for circle drawing?

h) What are some limitations of filling algorithms?

i) What advantages did CRT displays have over early flat panel displays?

j) How do DDA line drawing algorithm works?

SECTION-B

2. How do matrix operations represent 2D transformations, such as translation, rotation, scaling, and shearing? What are the resulting coordinates for the line segment with end points (3, 4) & (7, 5) rotated around the origin by 60 degrees counterclockwise?

3. What are some common circle-drawing algorithms and how do they work? Explain the concept of Mid-point.

4. How do CRT displays differ from modern flat panel displays? What is the difference between working of a LCD, LED and OLED flat panel display?

5. How do matrix operations represent 3D transformations, such as translation, rotation, scaling, and shearing? Illustrate. How do different 3D transformations differ from respective 2D transformations?

6. How do Cohen-Sutherland and Liang-Barsky clipping algorithms work, and what are their strengths and weaknesses? Given the line segment with endpoints (2, 5) and (12, 8), and the clipping region defined by the four inequalities $x >= 3$, $x <= 9$, $y >= 2$, and $y <= 7$, apply the Liang-Barsky algorithm to clip the line segment.

7. How do different input devices affect user interaction with computer systems? Discuss different types of modern day input devices.

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BCA (Sem–5)
PROGRAMMING IN JAVA
Subject Code : UGCA1932
M.Code : 90315
Date of Examination : 22-06-2023

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTIONS TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.**

SECTION-A

1. **Write briefly :**

   a) What are the benefits of OOP?

   b) How Java differs from C++?

   c) Write about Window Listener Event Handling.

   d) How web browsers are used in Java?

   e) What is JVM?

   f) What are Zagged Arrays?

   g) What is a Package? How Packages are useful in Java?

   h) Define polymorphism with an example.

   i) What is an Abstract class?

   j) How Java Byte Code makes it independent?

SECTION-B

2. **Explain the following :**

   a) Constructors and their syntax

   b) Methods Overloading

3. Discuss various loop statements and branching statements available in Java. Show their syntax.

4. Discuss various operators and expressions available in Java and write their syntax.

5. What is Java I/O handling? Write about data I/P and data O/P streams.

6. Create a Date class in Java having day, month and year data members. Create constructors for initializing data members, functions for validating date, getting values of data members and displaying the date.

7. Explain with examples, the various graphics methods supported by AWT. How color of an object can be changed?

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BCA (Sem.–5)
INTERNET OF THINGS
Subject Code : UGCA1933
M.Code : 90316
Date of Examination : 07-06-2023

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :
1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.

SECTION-A

1. Write briefly :

a. What is basic difference between M2M and IoT?

b. Define term embedded system.

c. What is the role of communication protocols in IoT systems?

d. Define Raspberry.

e. Define role of cloud based applications in IoT system.

f. Explain role of IoT systems in home automation.

g. Define network management protocols.

h. Define SPI interface.

i. Define NETCONF.

j. What is the usage of M2M gateway?

SECTION-B

2. Explain the different levels of IoT in detail with the help of suitable examples.

3. Propose an IoT solution for smart agriculture for a crop management (highlight the existing system where human interaction is involved and how an IoT system can overcome it), also explain how the proposed IoT solution will help the farmers to increase productivity of the crops.

4. Explain Domain specific IoTs-City and Environment.

5. Define need for IoT system management and explain simple network management protocols in detail.

6. Explain cloud storage models and communication APIs.

7. Explain the technologies and applications of IoT.

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BCA (Sem–6)

ANDROID PROGRAMMING

Subject Code : UGCA-1943

M.Code : 91681

Date of Examination : 29-05-2023

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.

SECTION-A

1. Answer the following :

a) List some features of Android operating system.

b) What content the values folder contains in the directory structure of an android project?

c) What is the use of Spinner View in Android?

d) List the attributes specified by activity element of AndroidManifest.xml file.

e) Give an example to use on Create() method.

f) List various components of a User Interface of an android project.

g) What are the four essential activity states during lifecycle of an android app?

h) Mention some key design principles for a mobile application development.

i) What do you mean by "Modifiability" in mobile applications?

j) What is Android Emulator?

SECTION-B

2. List and explain some commonly used layouts in Android with suitable examples.

3. Explain various components of the android architecture with neat diagram.

4. List and explain the steps to develop an android application using DatePicker widget.

5. What is the advantage of integrating cloud services for Android application development? Explain the integration process in detail.

6. a) List and discuss various testing methodologies used for mobile applications.

   b) Explain Mobile Software Engineering phases for mobile applications in detail.

7. **Write short notes on:**

   a) Leveraging Android XML

   b) Security issues in mobile applications.

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BCA (Sem–6)

INFORMATION SECURITY

Subject Code : UGCA 1948

M.Code : 91695

Date of Examination: 27-05-2023

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.

SECTION-A

1. **Write Briefly :**

   a) What is Security Assurance?

   b) Define Intruder.

   c) Define role of cryptography.

   d) Who are called Computer Criminals?

   e) What is Information Security?

   f) What are Threats in Network?

   g) Explain Software Failures.

   h) Differentiate between authentication and authorization.

   i) What is an Attack?

   j) What are the Rights of Employees and Employers in Administering Security?

SECTION-B

2. Discuss the File protection mechanisms in detail?

3. Discuss different steps involved in Security System Development Life cycle?

4. With the suitable example illustrate the effect of Virus and their types the computer System.

5. Explain the principle of Public Key Cryptosystem? Write the fundamentals of RSA Algorithm?

6. Give the overview of Firewalls. What are its design principle and its types?

7. **Explain:**

   a) Electronic Mail Security

   b) Web Security.

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Bachelor of Computer Applications (Sem.–6)

DIGITAL MARKETING

Subject Code : UGCA1947

M.Code : 91691

Date of Examination : 25-05-2023

Time : 3 Hrs. Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.

SECTION-A

1. Write briefly :

   a) Marketing

   b) SEO

   c) Google rankings

   d) P-O-E-M Framework

   e) Blogging

   f) Social media engagement

   g) Role of adverts

   h) Display media

   i) Paid search

   j) LinkedIn marketing.

SECTION-B

2. What is the digital marketing landscape in India? What are the skills required in digital Marketing?

3. Discuss the various types of social media websites. What are the do's & don'ts of social media?

4. What are the various techniques of blogging? What blogging platforms would you recommend to a new blogger?

5. What is the role of adverts in Facebook marketing? How can the scheduling & targeting of adverts be done?

6. What is the history of web analytic tools? What are their pitfalls?

7. Discuss the various content creation tools & apps. What are the challenges of content marketing?

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Roll No. | | | | | | | | | | | |

Total No. of Pages : 02

Total No. of Questions : 07

BCA (Sem.–6)

CYBER LAWS & IPR

Subject Code : UGCA-1949

M.Code : 91696

Date of Examination : 18-05-23

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.

SECTION-A

1. Write briefly :

a) What is the Computer Fraud and Abuse Act and how does it define computer crimes?

b) What is a trademark and how is it different from a copyright?

c) How are patents granted and what types of inventions can be patented?

d) What is the difference between a cybercrime and a traditional crime?

e) What is cyber bullying and what laws are in place to protect individuals from it?

f) What is identity theft and what laws are in place to protect individuals from it?

g) What is malware and what laws are in place to prevent its creation and distribution?

h) What are phishing and what are some common strategies used by cybercriminals to carry out phishing attacks?

i) What is ransomware and how can individuals and organizations protect themselves from it?

j) What is the Information Technology Act and when was it enacted in India?

SECTION-B

2. How has the Information Technology Act of 2000 impacted the development of India's IT and digital industries and what are some of the key provisions of the act that have helped to promote cyber security and data protection in the country?

3. What are some of the key issues related to online privacy, including data collection, surveillance and the use of personal information by third parties and what legal frameworks and technologies exist to protect privacy rights in the digital age?

4. How do open source software licenses, such as the General Public License (GPL), impact the distribution and use of software code and what are some of the key benefits and challenges of using open source software in commercial and non-commercial contexts?

5. How are patent disputes resolved and what legal remedies are available to patent holders in cases of infringement or misappropriation of patented technology by third parties?

6. What is a trademark and how does it differ from other types of intellectual property, such as patents and copyrights?

7. What are some of the key issues related to privacy rights in the digital age and what strategies can individuals and organizations use to protect their privacy rights in these contexts?

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Total No. of Pages : 2

Total No. of Questions : 07

B.Sc (GWD) (Sem.–6)

INTRODUCTION TO GAMING

Subject Code : UGWD-1918

M.Code : 92000

Date of Examination : 16-05-2023

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains SIX questions carrying TEN marks each and students have to attempt any FOUR questions.

SECTION-A

1. **Write briefly :**

   a) How do you define the Gaming Industry?

   b) Which languages are must to develop a game?

   c) State some different genres of Gaming.

   d) Is there a career in Gaming Industry?

   e) State any 2 different roles which exist in Game development.

   f) Name a popular game and state the programming language used on it.

   g) What do you mean by Level design?

   h) What are Video game platforms?

   i) What Elements constitute a Game?

   j) State some real life examples of level design.

SECTION-B

2. Give introduction to different theories of Game Designing in detail.

3. Illustrate the Case study of any popular Game showcasing all the concepts of game design and elements of a game.

4. Explain all the different roles of Game development in detail.

5. Illustrate a general overview of what fields exists in programming for games and how they differ from each other?

6. What is a Game? Explain its history by giving examples and popular titles used for it.

7. Explain all genres of Gaming in detail and different platforms where they exist and how they differ?

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