

**Gurdasidevi Institute of Management and Technology (GIMT)
(Affiliated with IKG. Punjab Technical University)**

ASSIGNMENT

Course	B.Sc(IT)	Semester	1st
Mcode	76954	Subject Code	UGCA1908
Subject	Computer System Architecture		

Answer the following Questions in about 500 words each. (Write Any Three) (Long Questions)

1. a) What is Boolean Algebra? Explain the role of De Morgan's theorem in Boolean Algebra.
b) Explain three input NOR gate with truth table and logic circuit.
2. What is a Multiplexer? Explain with a truth table and logic circuit the design of an 8 to 1 line multiplexer.
3. Explain Binary Adder/Subtractor with the help of an example.
4. Explain the 16-bit common bus system of the computer with the help of a neat diagram.
5. Explain the working of a JK flip-flop with a truth table and logic circuit.
6. Explain with diagrammatic illustration the Von Neumann architecture.

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ASSIGNMENT

Course	B.Sc(IT)	Semester	1st
Mcode	75085	Subject Code	BTHU103/18
Subject	English		

Answer the following Questions in about 500 words each. (Write Any Three) (Long Questions)

1. Elaborate theory of communication.
2. Differentiate between Intra-personal, Inter-personal and Group Communication.
3. Explain barriers to communication.
4. **Read the following passage carefully and answer the questions that follow :**

There are good reasons why the 'Heart of Asia' conference, part of a 14-nation process begun in 2011 to facilitate the development and security of Afghanistan, is so named. The obvious one is geographical, as Afghanistan lies at the junction of Central, South and East Asia, and also of the ancient trading routes from China and India to Europe. Today it is also a focal point for the region's biggest challenge of terrorism; some of the far-reaching battles against al-Qaeda, Islamic State, etc. will be decided on the battlegrounds of Afghanistan. For India, putting terror centre stage at the Heart of Asia declaration in Amritsar was thus timely and necessary. In tandem, Afghan President Ashraf Ghani and Prime Minister Narendra Modi focussed their concerns on cross-border terrorism emanating from Pakistan, something even Pakistan's traditional allies at the conference, including China, Saudi Arabia, the UAE and Turkey, found difficult to counter. The case Mr. Ghani made was clear: progress and development in Afghanistan are meaningless and unsustainable without peace, and peace is contingent on Pakistan ending support to terror groups such as the Haqqani network and Lashkar-e-Taiba. He dared Pakistan to use its proposed development grant to - Afghanistan, to fight terror on its own soil. However, if every window for engagement with Pakistan is closed for India and Afghanistan, the two countries must closely consider what their next step will be. A lack of engagement may, in the short term, yield some pressure on Pakistan's leadership to act, as it did briefly after the Pathankot attack. But in the long run it may deplete the two countries of their limited leverage as Pakistan's neighbours. It may, for all the affirmations of mutual, ties, also succeed in driving more obstacles to trade between India and Afghanistan/ In the past year, the cornering of Pakistan by its South Asian neighbours has only yielded deeper ties for Islamabad with Beijing and Moscow, pushed Kabul closer to Central Asia, and moved New Delhi towards multilateral groupings to the east and south. As a result, the measures India and Afghanistan have envisaged in order to avoid Pakistan, such as land trade from the Chabahar port and a dedicated air corridor between Delhi and Kabul, may prove to be insufficient by the time they are put in place, even as Afghanistan is connected more closely via a rail line from China's Yiwu and Tehran. The Heart of Asia process thus remains critical to forging cooperation to realise Afghanistan's potential to be a vibrant Asian "hub".

Questions:

- a. What according to the author was the initial agenda for the 'Heart of Asia' conference?
 - b. What is mandatory for sustainable development and to attain peace in Afghanistan?
 - c. In the given passage, why Afghanistan is being considered as the 'focal point' of terrorism?
 - d. What may prove insufficient?
 - e. What is the theme of this passage?
5. Write a letter to your friend about the increasing road accidents and measures to reduce these.
 6. Write a detailed analysis of any book that you have recently read.

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ASSIGNMENT

Course	B.Sc(IT)	Semester	1st
Mcode	76962	Subject Code	UGCA1902
Subject	Fundamentals of Computer and IT		

Answer the following Questions in about 500 words each. (Write Any Three) (Long Questions)

1. Discuss various types of Input and Output devices used in Computer Systems with their advantages.
2. What is need for animation? How the formatting is done on slide shows?
3. What is the use of operating system? Explain multi programming and utility programs.
4. a) Write the editing features of text in Word documents.
b) How the page setting is performed in Word file?
5. Explain the various payment systems available for electronic transaction.
6. Discuss Cloud Computing? What is the role of cloud computing in IT applications?

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ASSIGNMENT

Course	B.Sc(IT)	Semester	1st
Mcode	75087	Subject Code	HVPE101-18
Subject	Human Values, De-addiction and Traffic Rules		

Answer the following Questions in about 500 words each. (Write Any Three) (Long Questions)

7. a) ਪੇਸ਼ੇਵਰ ਨੈਤਿਕਤਾ ਵਿੱਚ ਸਮਰਥਾ ਸਮਝਾਓ
b) ਕੁਦਰਤ ਵਿੱਚ ਆਮ ਨਿਯਮਤਾ ਅਤੇ ਚੱਕਰੀ ਕ੍ਰਮ ਕਿਵੇਂ ਹੈ?
8. a) ਮੂਲ ਪਹਿਲੂਆਂ ਦੇ ਆਧਾਰ ਉੱਤੇ ਕੁਦਰਤ ਵਿੱਚ ਚਾਰ ਆਦੇਸ਼ਾਂ ਦੀ ਤੁਲਨਾ ਕਰੋ
b) ਆਤਮ-ਅਧਿਅਨ ਦੇ ਮਤਲਬ ਅਤੇ ਉਦੇਸ਼ ਕੀ ਹਨ
9. a) ਬੁਨਿਆਦੀ ਮਾਨਵੀ ਇੱਛਾਵਾਂ ਕੀ ਹਨ ਬੁਨਿਆਦੀ ਮਾਨਵੀ ਇੱਛਾਵਾਂ ਨੂੰ ਪੂਰਾ ਕਰਨ ਲਈ ਜਰੂਰਤਾਂ ਦਾ ਵਰਣਨ ਕਰੋ
b) ਮਨੁੱਖ ਸਵੈ ਅਤੇ ਸਰੀਰ ਦਾ ਸਹੇ-ਅਸਤੀਤਵ ਕਿਵੇਂ ਹੈ ਪੂਰਵ-ਮਾਨਤਾ ਸੁਵੇਦਨਾ ਅਤੇ ਸਹਿਜ-ਸਵੀਕ੍ਰਤੀ ਸਮਝਾਓ
10. a) ਇੱਕ ਢੁਕਵੇਂ ਚਿੱਤਰ ਦੀ ਮਦਦ ਨਾਲ ਆਤਮ ਅਧਿਅਨ ਦੀ ਪ੍ਰਕਿਰਿਆ ਨੂੰ ਸਮਝਾਓ
b) ਪੂਰਵ-ਮਾਨਤਾ ਇੱਛਾਵਾਂ ਦੇ ਆਧਾਰ ਉੱਤੇ ਚਲਣ ਕਰਕੇ ਅੱਜ ਅਸੀਂ ਕਿਹੜੀਆਂ ਕਿਹੜੀਆਂ ਸਮੱਸਿਆਵਾਂ ਦਾ ਸਾਹਮਣਾ ਕਰ ਰਹੇ ਹਾਂ
11. a) ਮੌਜੂਦਾ ਸਮਾਂ ਵਿੱਚ ਪੇਸ਼ੇ ਦੇ ਮਨੁੱਖ ਅਨੈਤਿਕ ਤਰੀਕੇ ਕੀ ਹਨ? ਮੂਲ ਕਾਰਨ ਅਤੇ ਸੰਭਵ ਸਮਾਧਾਨ ਦਾ ਵਿਸ਼ਲੇਸ਼ਣ ਕਰੋ
b) ਸਮਾਜ ਵਿੱਚ ਮਨੁੱਖੀ ਕੋਸ਼ਿਸ਼ ਤੇ ਪੰਜ ਪਹਿਲੂ ਕੀ ਹਨ ?
12. a) ਟੈਕਨੋਲੋਜੀ, ਉਤਪਾਦਨ ਸਿਸਟਮ ਅਤੇ ਪ੍ਰਬੰਧਨ ਮਾਡਲ ਦੀ ਪੜਤਾਲ ਕਰਨ ਲਈ ਵਿਆਪਕ ਸੰਪੂਰਨ ਮਾਪਦੰਡ ਕੀ ਹਨ? ਕਿਵੇਂ ਉਹ ਵਿਆਪਕ ਮਨੁੱਖ ਲਕਸ਼ ਦੇ ਨਾਲ ਮੇਲ ਖਾਂਦੀ ਹੈ?
b) ਆਤਮ-ਸੰਗਠਨ ਅਤੇ ਸਿਹਤ ਦੇ ਬਾਰੇ ਵਿੱਚ ਦੱਸੋ

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ASSIGNMENT

Course	B.Sc(IT)	Semester	1st
Mcode	76961	Subject Code	UGCA1901
Subject			

Answer the following Questions in about 500 words each. (Write Any Three) (Long Questions)

1. 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 $3 \begin{bmatrix} x & y \\ z & w \end{bmatrix} = \begin{bmatrix} x & 6 \\ -1 & 2w \end{bmatrix} + \begin{bmatrix} 4 & x+y \\ z+w & 3 \end{bmatrix}$.

2. 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.

3. 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.

4. 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.

5. 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.

6. 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.