

**Program:** DTE 1<sup>st</sup> Semester  
**Semester:** Winter semester

**Date:** 06 December, 2022 (Wednesday)  
**Time:** 10:00 am – 01:00 pm

**ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)**  
**ORGANISATION OF ISLAMIC COOPERATION (OIC)**  
**DEPARTMENT OF TECHNICAL AND VOCATIONAL EDUCATION (TVE)**

**Exam:** Semester Final Examination  
**Course Number:** TVE 4103  
**Course Title:** Educational Psychology

**Academic Year:** 2021 – 2022  
**Full Marks:** 150  
**Duration:** 3 Hours

**There are seven (7) questions. Answer any six (6) questions. Question 1 is compulsory.**  
Figures in the right margin indicate marks of the questions. The symbols have their usual meanings.

1. a) Define psychology and its origin. (05) CO1  
 b) What is introspection (internal perception)? How did Wilhelm Wundt use this approach to his psychological research? (15)  
 c) Differentiate between structuralism and functionalism. (05)
2. a) List the periods of human development with their time frame. (05) CO2  
 b) *Current views of psychology emphasize complex coactions (joint actions) of nature and nurture as the source of human development-* Explain this statement with an example. (10)  
 c) What is critical and sensitive periods of human development? Can later positive experience overcome the early unpleasant experience of a child? Explain. (10)
3. Read the following dialogue, which is an example of how Piaget examined the thinking of a 9-year-old who lived in Geneva city: CO1  
 CO2  
*What is your nationality?* —I am Swiss.  
*How come?* —Because I live in Switzerland.  
*Are you also a Genevan?* —No, that's not possible . . . I'm already Swiss, I can't also be Genevan. (Piaget, 1965)  
 i) Discuss the concept of two basic tendencies in thinking based on the above dialogue. (10)  
 ii) What is the core argument Piaget draws from this dialogue to develop his theory? (10)  
 iii) What is the name of his theory? (05)
4. a) According to Piaget's theory, at what stage a child can perform a logical, goal-directed action? Can the child reverse their action in this stage? Discuss with an example. (12) CO2  
 CO3  
 b) What is centration? When does the centration emerge among the children? How does this affect the conservation task of a child? (13)
5. a) What is operation according to Piaget's theory? (05) CO2  
 b) How does reversibility impact children to perform the conservation task? (08) CO3  
 c) Explain the term transitivity with an example. What are the educational implications of transitivity? (12)
6. a) What is associative learning? Give an example. (05) CO3  
 b) Discuss about different types of stimulus and responses according to Pavlov's theory of classical conditioning. How do they relate to students' classroom behavior? (12)  
 c) How does the theory of classical conditioning apply in classroom situations? (08)
7. a) What is the law of effect? Explain it with an example. (10) CO2  
 b) What is positive reinforcement, negative reinforcement, and punishment in the context of operant conditioning? In a classroom context, describe them with an example. (15) CO3

**Program:** BScTE 2 Years 3<sup>rd</sup> Semester  
**Semester:** Winter

**Date:** 07 December, 2022 (Wednesday)  
**Time:** 10:00 am – 01:00 pm

**ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)**  
 ORGANISATION OF ISLAMIC COOPERATION (OIC)  
 DEPARTMENT OF TECHNICAL AND VOCATIONAL EDUCATION (TVE)

**Exam:** Semester Final Examination

**Academic Year:** 2021 – 2022

**Course Number:** TVE 4117

**Full Marks:** 150

**Course Title:** Curriculum Development, Administration  
 & Supervision of Technical and Vocational Education

**Duration:** 3 Hours

There are 8 (eight) questions. Answer any 6 (six) questions. The symbols have their usual meaning.

- |    |    |  |    |          |
|----|----|--|----|----------|
| 1. | a) | Define Curriculum. Differentiate between formal, informal and hidden curriculum with examples from the technical and vocational education context.   | 10 | CO1      |
|    | b) | Differentiate between curriculum and syllabus. What is the expected list of elements are found in a syllabus.  | 08 |          |
|    | c) | How can you adapt PCK within a model of Curriculum practice? Explain with an example of Lesson plan.   | 07 |          |
| 2. | a) | Which philosophical stance (Perennialism, Essentialism or Progressivism) will you consider when planning for a curriculum of a diploma engineering program (3 or 4 year) in your country?                                      | 10 | CO1, CO2 |
|    | b) | Which system do you prefer for your country and why – a centralized or a decentralized system?   | 10 |          |
|    | c) | Why <i>curriculum alignment</i> is important? Explain with examples.   | 05 |          |
| 3. | a) | What is <i>cognitive overload</i> ? What strategies are recommended in curriculum implementation to prevent <i>cognitive overload</i> ?  | 15 | CO2      |
|    | b) | According to the <i>information processing model</i> , there is an indication of <i>retrieval failure</i> . Which theories are capable of explaining why <i>retrieval failure</i> happens?                                     | 10 |          |
| 4. | a) | Describe the characteristics of a high-performance team. What strategies do you follow throughout the lifecycle of a team to assess its performance?   | 15 | CO3      |
|    | b) | “Organizations shouldn’t be striving for more communication, they should be striving for less, and communication is a sign of a dysfunctional organization.” Do you agree/disagree with this statement? - Justify your answer. | 10 |          |
| 5. |    | Consider a behavior that you want to develop/change within the students in your class. Explain how you can apply behaviorism theory to observe such change.  | 10 | CO2      |
|    |    |  | 15 |          |

Identify the following terms when you explain the above situation.

- i. unconditioned stimulus
- ii. Unconditioned Response
- iii. Conditioned Stimulus
- iv. Neutral Stimulus



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6. Imagine you are working in a subsidiary organ of OIC. In your organization you need to communicate with the following four types of people. **25 CO3**
- i. The hostile person
  - ii. The indifferent person
  - iii. The uninformed person
  - iv. The supportive person

To maintain effective communication with each type of above person, answer the following question.

- a. How do they communicate?
  - b. Why do they communicate that way?
  - c. How can you communicate with them?
7. a) Differentiate between rote learning and meaningful learning. Which type do you prefer and why during curriculum implementation? **10 CO3**
- b) Consider yourself a classroom teacher. What will you do for your students to store and encode information in their long-term memory? Based on the cognitive theory explain the three methods of storing and encoding: **10**
- i. Rehearsal
  - ii. Elaboration
  - iii. Organization
- c) List five basic differences between Behavioral views and the Cognitive views of learning. **05**
8. a) What are the *Belbin team role* types? Describe how each role contributes to a project's lifecycle. **10 CO3**
- b) What is the characteristics weakness of each *Belbin team role* type, and when do these weaknesses need to be addressed? **15**

**Program:** B.Sc. ME 1<sup>st</sup> Semester  
**Semester:** Winter semester

**Date:** 07 December, 2022 (Wednesday)  
**Time:** 10:00 am – 01:00 pm

**ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)**  
 ORGANISATION OF ISLAMIC COOPERATION (OIC)  
 DEPARTMENT OF TECHNICAL AND VOCATIONAL EDUCATION (TVE)

**Exam:** Semester Final Examination

**Academic Year:** 2021 – 2022

**Course Number:** Hum 4117

**Full Marks:** 150

**Course Title:** Islamic Culture and Professional Ethics

**Duration:** 3 Hours

There are 6 (six) questions. Answer all of them. The symbols have their usual meaning.

- |    |    |  |    |     |
|----|----|--|----|-----|
| 1. | a) | Write the Farewell Address of our Beloved Prophet Muhammad (SM).   | 10 | CO2 |
|    | b) | What should be done to establish a real Islamic State in the world as per the model set by the Prophet Muhammad (S)? Write about the concept of Political System in Islam. | 15 | CO1 |
| 2. | a) | Describe human rights in Islam.  | 15 | CO2 |
|    | b) | Write about the dignity of men and women in the Islam.   | 10 | CO1 |
| 3. | a) | Illustrate the role of Islam in eradicating social evils.  | 15 | CO1 |
|    | b) | Describe Engineering ethics in the light of Islam.   | 10 | CO3 |
| 4. | a) | What is Islamic Arts and Crafts? Write the history of Islamic Arts.  | 15 | CO4 |
|    | b) | What kind of emphasis given in Islam to maintain the family ties. Write elaborately the Importance of family ties.   | 10 | CO1 |
| 5. | a) | Discuss about Shariah (Islamic Law). Write the differences between Man-made Law and Allah's Law.   | 15 |     |
|    | b) | How can you reflect Islamic Ethics in your life? Elaborate your answer.  | 10 | CO2 |
| 6. | a) | What do you know about Social life in Islam?   | 10 |     |
|    | b) | Write the status and rights of woman in Islam.   | 05 | CO1 |
|    | c) | Discuss the importance of "Economic system of Islam" to the modern world and write its principles.   | 10 |     |

**Program:** B.Sc EEE 1<sup>st</sup> Semester  
**Semester:** Winter Semester

**Date:** 02 December 2022 (Friday)  
**Time:** 10:00 am – 01:00pm

**ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)**  
ORGANISATION OF ISLAMIC COOPERATION (OIC)  
**DEPARTMENT OF TECHNICAL AND VOCATIONAL EDUCATION (TVE)**

**Exam:** Semester Final Examination

**Winter Semester:** 2021 – 2022

**Course Number:** Hum 4125

**Full Marks:** 150

**Course Title:** Islamic History, Culture and Philosophy

**Duration:** 3 Hours

There are 8 (eight) questions. Answer 6 (six) questions. Question 7 is compulsory. The symbols have their usual meaning.

- |    |      |   |    |     |
|----|------|---|----|-----|
| 1. | a)   | Write about the subject matters of <i>kitabul Ibar</i> authored by ibne-Khaldoun.                                     | 15 | CO1 |
|    | b)   | Why did he criticize other historians such as al- Mas'udi?  | 05 | CO2 |
|    | c)   | Explain his philosophy regarding the influence of the climate in the perspective modern times.                        | 05 |     |
| 2. |      | Write about the political and constitutional reformation and welfare systems initiated by Omar (R.).                  | 25 | CO2 |
| 3. |      | Evaluate the role of al-Mamun as the patron of Muslim Science.  | 25 | CO1 |
| 4. |      | Analyze the development of Muslim navigation system during the early period of Islam.                                 | 25 | CO2 |
| 5. | a)   | Discuss the stance of al-Quran regarding the development of science.  | 15 |     |
|    | b)   | Explain the following in light of the Quranic verses:   |    | CO2 |
|    | i.   | Expansion of the universe   | 05 |     |
|    | ii.  | Division of an atom   | 05 |     |
| 6. |      | Discuss contribution of the Muslims to the development of the following:  |    |     |
|    | i.   | Mathematics, including the Arabic numerals  | 10 | CO2 |
|    | ii.  | Chemistry   | 15 |     |
| 7. | a)   | Discuss the modernist tendency regarding the adaptation of the Muslim Law into the modern society.                    | 15 | CO2 |
|    | b)   | How do you think the industrialization endeavor could be expedited in the OIC member countries through the following: |    | CO3 |
|    | i.   | Legal stratagem   | 05 |     |
|    | ii.  | Mudaraba  | 05 |     |
| 8. |      | Write short notes on the following:   |    |     |
|    | i.   | Masjid al-Aqsa  | 10 | CO1 |
|    | ii.  | Intervention of the authority ( <i>siyasa</i> )   | 05 | CO2 |
|    | iii. | Brethren of Sincerity ( <i>Ikhwanus-safa</i> )  | 10 | CO1 |





**Program:** BScTE 2-Yr, 3<sup>rd</sup> Sem.  
**Semester:** Winter semester

**Date:** 15 December, 2022  
**Time:** 10:00 am – 01:00 pm

**ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)**  
**ORGANISATION OF ISLAMIC COOPERATION (OIC)**  
**DEPARTMENT OF TECHNICAL AND VOCATIONAL EDUCATION (TVE)**

**Exam:** Semester Final Examination  
**Course Number:** TVE 4143  
**Course Title:** Comparative Education

**Academic Year:** 2021 – 2022  
**Full Marks:** 150  
**Duration:** 3 Hours

There are 8 (eight) questions. Answer any 6 (six) questions. The symbols have their usual meaning.

1. a) Define the concept of comparative education. 05  
b) What are the purposes of comparative education? - explain. 10  
c) Discuss the different problems of comparative education. 10
2. a) Why different methods are used for studying comparative education? 10  
b) Explain briefly the different methods of comparative education. 15
3. a) Explain briefly different factors which influence technical education. 10  
b) What is meant by a historical review of comparative education? Explain different stages of development of comparative education. 15
4. a) Explain briefly the Russian education system with the necessary diagram. 10  
b) State the education and economic reforms of the Russian education system. 10  
c) Discuss briefly the remodeling of the teacher training and re-training of the Russian education system. 05
5. a) Explain briefly the UK education system with a necessary diagram. 20  
b) Discuss the distance education system of UK education. 05
6. a) Explain the France education system with a necessary diagram. 15  
b) State the advantage and disadvantages of the France education system. 10
7. a) Discuss briefly the importance of community colleges in the USA education system. 10  
b) Discuss the technical and vocational education system in the USA. 10  
c) Explain in brief the needs for teachers' training in the USA education system. 05
8. a) Compare technical and vocational education systems of the USA & UK. 10  
b) What are the technical problems that you are facing to develop your education system and also how you can develop technical and vocational education systems in the OIC member states? 15



**Program:** B.Sc. CSE 1<sup>st</sup> Sem and B.Sc. SWE 1<sup>st</sup> Sem  
**Semester:** Winter semester

**Date:** 07 December 2022 (Wednesday)  
**Time:** 10:00 am – 01:00 pm

**ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)**  
 ORGANISATION OF ISLAMIC COOPERATION (OIC)  
 DEPARTMENT OF TECHNICAL AND VOCATIONAL EDUCATION (TVE)

**Exam:** Semester Final Examination  
**Course Number:** Hum 4145  
**Course Title:** Islamiyat.

**Winter Semester:** 2021 – 2022  
**Full Marks:** 100  
**Duration:** 3 hours

There are 8 (Eight) questions. Answer the question number 1&2 (One and Two) and any 4 (Four) from the rest. The symbols have their usual meaning.

- |       |   |    |     |         |
|-------|---|----|-----|---------|
| 1. a) | Draw the Importance of Eemaan in Al-Qadaa' Wal Qadar (Divine Preordainment) in Islam?   | 10 | CO2 | PO8/PO9 |
| b)    | Illustrate the elements should be avoided in Tawhidul Asma Was Sifat?   | 10 | CO3 | PO11    |
| 2. a) | Why do we worship Allah although Worship doesn't benefit Him?   | 10 | CO3 | PO11    |
| b)    | "An act of disobedience cannot be changed into an act of obedience simply due to a good intention", Discuss the fact according to the Concept of Etiquettes in Islam.   | 10 | CO2 | PO8/PO9 |
| 3. a) | Mention the Saying of "Hasan Basri" and "Abdullah bin Mubaarak" regarding good characters.  | 05 | CO1 | PO8     |
| b)    | What to do when you are in Fear of missing funeral or 'Eid prayer? Explain.   | 05 | CO3 | PO11    |
| c)    | In which Specific Part of Purification (Wadu/Gusl/Tayammum) making Niyyat (Intention) is Farz? Explain why?   | 05 | CO2 | PO8/PO9 |
| 4. a) | How do you glorify Fasting of the month of Ramadan in your Eye?   | 05 | CO2 | PO8/PO9 |
| b)    | "Whoever can guarantee (the chastity of) what is between his two jaw-bones and what is between his two legs, I guarantee Paradise for him." (Bukhari), Explain.   | 05 | CO2 | PO8/PO9 |
| c)    | "if one does not abandon from falsehood and other actions like it, God has no need that one should abandon one's food and drink" (Bukhari), How to apply the Concept of Fasting is your Daily Life according to this Hadith . | 05 | CO3 | PO11    |
| 5. a) | Compare 'Ibn Khaldun' and his book ' <i>Muqaddimah</i> ' (the prolegomena) with 'Adam smith' and his book ' <i>wealth of the Nation</i> '.  | 05 | CO2 | PO8/PO9 |
| b)    | "Man is free and has free will to choose"- How to apply the 'Concept of Reward, Crime & Punishment' in your life according to Quran and Sunnah.   | 05 | CO3 | PO11    |
| c)    | Define Nisab and Masaarif with lexical explanations.  | 05 | CO1 | PO8     |
| 6. a) | Write down the concept of Fornication and Adultery in Islam.  | 05 | CO1 | PO8     |
| b)    | Discuss the Islamic Approach to Combating Crime.  | 05 | CO2 | PO8/PO9 |
| c)    | "Mumin's matter is surprising", How and why?  | 05 | CO3 | PO11    |



7. a) Where are we from and where we are going to? 05 CO3 PO11
- b) Write short Note on: 05 CO1 PO8
- i. Tahazzud,
  - ii. Tarawih,
  - iii. Qiyamull Layl,
  - iv. Sahri and Iftar,
  - v. I'tikaf.
- c) "Surely prayer keeps (one) away from indecency and evil- Sura Ankabut; [29:45] - How prayer prohibits immorality and wrongdoing in the society? 05 CO2 PO8/PO9
8. a) Write short notes on the following: 05 CO1 PO8
- i. Murabaha,
  - ii. Mudarabah and Musharakah,
  - iii. Istisna and Salam,
  - iv. Bai Muajjal.
- b) Draw the difference between Capitalist, Socialist and Islamic economic point of view. 05 CO3 PO11
- c) What is the Difference between FUQA'RAA and MASAAKEEN in Zakah? 05 CO2 PO8/PO9

**Program:** B.Sc.CSE 1<sup>st</sup> Sem and B.Sc.SWE 1<sup>st</sup> Sem  
**Semester:** Winter semester

**Date:** 09 December, 2022 (Friday)  
**Time:** 10:00 am – 01:00 pm

**ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)**  
**ORGANISATION OF ISLAMIC COOPERATION (OIC)**  
**DEPARTMENT OF TECHNICAL AND VOCATIONAL EDUCATION (TVE)**

**Exam:** Semester Final Examination

**Academic Year:** 2021 – 2022

**Course Number:** Hum 4147

**Full Marks:** 150

**Course Title:** Technology, Environment and Society

**Duration:** 3 Hours

There are 6 (six) questions. Answer all of them. The symbols have their usual meaning.

1. a) Give a list of ecologically critical Areas under the Bangladesh Environmental Conservation Rules, 1997. (05) CO4 PO1, PO7
- b) Write short notes on the following: (10) CO2
  - i. Urban Heat Island
  - ii. Biodiversity Conservation
- c) Define Biodiversity. What are the necessary elements of rich biodiversity in an ecosystem? Explain with examples. (10) CO1
2. a) What are the conditions that green technology has to fulfill? (05) CO4 PO7
- b) Assume you are preparing the LCA (life cycle Assessment) of an industry. The type of industry is similar to a “new generation industry” Select and describe methods to achieve “minimum or zero waste” that you think is suitable for the industry of your concern. (10) CO3
- c) Suppose an industry in your locality is discharging effluent into the river and at the same time emitting GHG. Demarcate the component of pollution as (1) Local and (2) Global. Show the linkage between them. (10) CO4
3. a) Define the Earth system. List the components of the earth system. (05) CO1 PO1, PO7
- b) What do you understand by Environment? Explain the relationship between the environment, society, and technology. (10)
- c) Explain the functions of an Ecosystem. (10)
4. a) Define renewable energy. What are the sources of extracting this energy? Explain the extracting methods from these sources in a generic way. (12) CO3 PO7
- b) Explain the benefits of using renewable energy. (08)
- c) Could Nuclear Energy be classified as renewable? (05)
5. a) Explain the process of ozone layer depletion with chemical reactions and mention the impacts of ozone layer depletion on Human Health and Ecology. (10) CO2 PO1, PO7
- b) Uncontrolled population growth is an environmental concern. What is your opinion? Explain with logical reasoning. (10)
- c) Mention the seven (7) theories of Climate Change. (05)
6. a) Write short notes on the following: (10) CO4 PO7
  - i. Kyoto protocol
  - ii. Ecological Footprint
  - iii. Carbon Trading
- b) What are the impacts areas of a Cyclone on coastal communities? (05)
- c) State and explain the Environmental Hazards. (10)



**Program:** B.Sc.TE 2 Years 1<sup>st</sup> Semester  
**Semester:** Winter semester

**Date:** 08 December, 2022 (Thursday)  
**Time:** 10:00 am – 01:00 pm

**ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)**  
**ORGANISATION OF ISLAMIC COOPERATION (OIC)**  
**DEPARTMENT OF TECHNICAL AND VOCATIONAL EDUCATION (TVE)**

**Exam:** Semester Final Examination  
**Course Number:** Hum 4151  
**Course Title:** Social Studies and Accounting

**Academic Year:** 2021 – 2022  
**Full Marks:** 150  
**Duration:** 3 Hours

There are 7 (eight) questions in the 2 (two) sections. Answer 3 (three) questions in section A and 3 (three) questions in section B. The symbols have their usual meaning.

**Section A: Social Studies**

- 1. a) Explain the concept government with suitable examples. 05 CO2
- b) Democracy has become the most popular form of government world-wide in the 20<sup>th</sup> century. Why do many countries prefer it over other forms of governments? 10
- c) **Kokodi** is a country that is about to gain its independence. As one of leaders, would you recommend the establishment of Aristocracy as the system of government? Justify your answer. 10
  
- 2. a) Differentiate between Citizenship and nationality. 10 CO2
- b) State 5 (five) ways in which citizenship can be acquired. 05
- c) Do you think 'citizenship by investment' or 'economic citizenship' is good for your country? Support your answer with relevant examples. 10
  
- 3. a) What do you understand by International Blocks or Organizations? 05 CO3
- b) Do you think the Organisation of Islamic Cooperation (OIC) has achieved its goals for which it was established? Explain your answer. 10
- c) What is a regional organization? List 5 (five) regional organizations that you know. 10

**Section B: Accounting**

- 1. The following transactions of M/S Haruna Traders were completed in March 2022.

|         |  |
|---------|--|
| March 1 | Started business with cash of \$3,50,000 and furniture of \$60,000.                      |
| 2       | Opened account in AB Bank with \$1,00,000.   |
| 3       | Purchased goods worth \$40,000 for cash.   |
| 8       | Sold goods to Lamin on account \$60,000.   |
| 18      | Received \$ 59,000 from Lamin in full settlement and deposited the amount into the bank. |
| 29      | Paid salaries through bank \$25,000.   |
| 31      | Withdrew from the bank \$10,000 for office and \$5,000 for personal use.                 |

**Required:**

- a) Journalize the March transactions 14 CO1
- b) Post to the ledger accounts. 06 &
- c) Prepare a trial balance on March 31, 2022. 05 CO2

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2. a) Devin Wolf Company has the following balances in selected accounts on December 31, 2021.

18 CO1

|                                    |        |
|------------------------------------|--------|
| Accounts Receivable                | \$ -0- |
| Accumulated Depreciation—Equipment | -0-    |
| Equipment                          | 7,000  |
| Interest Payable                   | -0-    |
| Notes Payable                      | 10,000 |
| Prepaid Insurance                  | 2,100  |
| Salaries and Wages Payable         | -0-    |
| Supplies                           | 2,450  |
| Unearned Service Revenue           | 32,000 |

All the accounts have normal balances. The information below has been gathered at December 31, 2021.

- (i) Devin Wolf Company borrowed \$10,000 by signing a 9%, one-year note on September 1, 2021.
- (ii) A count of supplies on December 31, 2021, indicates that supplies of \$900 are on hand.
- (iii) Depreciation on the equipment for 2021 is \$1,000.
- (iv) Devin Wolf Company paid \$2,100 for 12 months of insurance coverage on June 1, 2021.
- (v) On December 1, 2021, Devin Wolf collected \$32,000 for consulting services to be performed from December 1, 2021, through March 31, 2022.
- (vi) Devin Wolf performed consulting services for a client in December 2021. The client will be billed \$4,200.

**Required:**

Prepare adjusting entries for the six items described above

- b) The trial balance of M/S Sadia Traders at December 31, 2020 shows Merchandise Inventory \$50,000, Sales \$2,42,400, Sales returns and allowances, \$6,800, Sales discounts \$4,600, Cost of goods sold \$130,000, Rental revenue \$9,000, Freight-out \$1,800, Rent expense \$8,800, Prepaid expenses \$ 45,000, Salaries and wages expenses \$62,000 and Drawing \$3,600.

07 CO2

**Required:**

Prepare the closing entries for the above accounts.

- 3. a) The following is the Trial Balance of M/S Mansour Traders as at December 31, 2021:

15 CO3

M/S Mansour Traders Trial Balance December 31, 2021

| Accounts Titles         | Debit              | Credit             |
|-------------------------|--------------------|--------------------|
| Buildings               | \$7,00,000         |                    |
| Furniture & Fittings    | 1,00,000           |                    |
| Purchases and Sales     | 5,00,000           | \$12,19,000        |
| Inventory (01-01-2021)  | 2,00,000           |                    |
| Allowance for Bad Debts |                    | 10,000             |
| 10% Loan (01-07-2021)   |                    | 40,000             |
| Account Receivable      | 3,00,000           |                    |
| Accounts Payable        |                    | 4,47,000           |
| Salaries Expense        | 1,00,000           |                    |
| Advertising Expense     | 21,000             |                    |
| Carriage Outward        | 6,000              |                    |
| Stores Expense          | 2,00,000           |                    |
| General Expense         | 65,000             |                    |
| Rent Income             |                    | 10,000             |
| Delivery Expense        | 4,000              |                    |
| 10% Investment          | 50,000             |                    |
| Mansour, Capital        |                    | 6,00,000           |
| Mansour, Drawing        | 30,000             |                    |
| Bank Balance            | 50,000             |                    |
| <b>Total</b>            | <b>\$23,26,000</b> | <b>\$23,26,000</b> |



**Additional information:**

- (i) Ending inventory was valued at \$2, 25,000, which includes goods worth \$25,000 sold but not yet delivered to the customer.
- (ii) Credit sales of \$2,000 has not been recorded in the books.
- (iii) Mansour has withdrawn goods worth \$3,000 for his personal consumption for which there is no record in the books.
- (iv) Write off \$6,000 as bad and make an allowance for bad debts at 5% on remaining accounts receivable.
- (v) Rent not yet received amounted to \$12,000.
- (vi) Accrued interest on investment amounts to \$2,500.
- (vii) Furniture and fittings to be depreciated @ 5%.

**Required:**

Prepare a classified income statement for the year ended December 31, 2021.

- b) Famara Co. began its operations on May 1, 2022. It uses a perpetual inventory system. During May, the company had the following purchases and sales.

10 CO4

| Date  | Purchases |           | Sales Units |
|-------|-----------|-----------|-------------|
|       | Units     | Unit Cost |             |
| May 1 | 7         | \$4,600   |             |
| 4     |           |           | 4           |
| 8     | 8         | \$5,100   |             |
| 12    |           |           | 5           |
| 15    | 6         | \$5,520   |             |
| 20    |           |           | 3           |
| 25    |           |           | 5           |

**Required:**

Determine the ending inventory and cost of goods sold under a perpetual inventory system using:

- (i) FIFO and
- (ii) LIFO.

4. a) What is the break-even point and what are its assumptions?

05 CO5

- b) The contribution format income statement of Yusuf Ltd. for the year 2020 is given below:

20

|                      | Total           | Per Unit    | Percentage of Sales |
|----------------------|-----------------|-------------|---------------------|
| Sales (10,000 units) | \$500,000       | \$50        | 100%                |
| Variable expenses    | <u>300,000</u>  | <u>30</u>   | <u>?%</u>           |
| Contribution margin  | 200,000         | <u>\$20</u> | <u>?%</u>           |
| Fixed expenses       | <u>170,000</u>  |             |                     |
| Net operating income | <u>\$30,000</u> |             |                     |

Management is anxious to increase the company's profit and has asked for an analysis of some items.

**Required:**

- (i) Compute the company's break-even point in both unit and sales dollars.
- (ii) Assume that sales increase by \$100,000 in 2021. If cost behavior patterns remain unchanged, by how much will the company's net operating income increase? Show the data by preparing a new contribution format income statement on a total, per unit, and percentage basis.
- (iii) Refer to the original data. Compute the company's margin of safety in both dollar and percentage form.

How many units will have to be sold to meet the company's target profit of \$70,000?

**Program:** B.Sc. CE 1<sup>st</sup> Semester  
**Semester:** Winter semester

**Date:** 14 December, 2022 (Wednesday)  
**Time:** 10:00 am – 01:00 pm

**ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)**  
**ORGANISATION OF ISLAMIC COOPERATION (OIC)**  
**DEPARTMENT OF TECHNICAL AND VOCATIONAL EDUCATION (TVE)**

**Exam:** Semester Final Examination  
**Course Number:** Hum 4157  
**Course Title:** Islamiat

**Academic Year:** 2021 - 2022  
**Full Marks:** 100  
**Time:** 3 Hours

There are 8 (eight) questions. Answer 6 (six) questions. Question number 1 (one) and question 8 (eight) are compulsory.

1. a) Explain the three basic discussion topics of the Quran as the fundamental beliefs of Islam as a whole. 15 CO1
- b) Describe how Islam has given the highest dignity for human being in every sphere of life. 10 CO4
2. a) Prophet Muhammad’s (pbuh) life is one of the major sources for Islamic Shariah. It is important to know about his life to understand the Islamic code of life. Sketch a short biography of the Prophet (pbuh) with recounting major events. 10 CO1
- b) Define the basic differences of the Prophet’s (pbuh) life in Mecca and Madinah. 05
3. a) Islamic theology has a vast arena. Portray its main branches showing representation of Islamic Shariah’s completeness. 10 CO1
- b) Narrate major fields of Islamic jurisprudence, Fiqh as the divine law of human practices. 05
4. a) Salah is the greatest act of worship in Islam as it directs us the way to be in front of ALLAH swt. Demonstrate how salah can be the safeguard of faith and salvation in both lives. 10 CO1
- b) While Islam has gifted manifold of worships. Describe the diverse characteristics in Islamic form of worship. 05
5. a) Islam is the only religion that has the solutions for every sphere of human life. Explain a summary for the Islamic political system. 10 CO1
- b) Point out the responsibilities of the Caliph in a Muslim state. 05
6. a) Moral values are inseparable part of Islamic culture and norms and Islam has a pragmatic application for these values from the very beginning of its journey. Extract Islamic ethical values from the Prophet’s practical life. 10 CO2
- b) Illustrate the importance of mankind in Islam since he is considered the vicegerent of ALLAH swt. 05
7. a) It is said that spirituality is the essence of Islam. Argue for or against that idea in light of the Quran and Hadith. 10 CO2
- b) Explain the relation of spirituality with Tasawuf and Ihsan. 05
8. a) Islam inspires for a healthy conjugal life and marriage is highly recommended by the Shariah. Explain why marriage has such importance in Islam. 10 CO3
- b) Narrate briefly the stand of Islam for lowering the gaze. 05



**Program:** BSc IPE 3<sup>rd</sup> Semester  
**Semester:** Winter semester

**Date:** 02 December, 2022 (Friday)  
**Time:** 10:00 am – 01:00 pm

**ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)**  
ORGANISATION OF ISLAMIC COOPERATION (OIC)  
**DEPARTMENT OF TECHNICAL AND VOCATIONAL EDUCATION (TVE)**

**Exam:** Semester Final Examination  
**Course Number:** Hum 4317  
**Course Title:** Science, Technology and Islam

**Academic Year:** 2021 – 2022  
**Full Marks:** 150  
**Duration:** 3 Hours

There are 6 (six) questions. Answer all of them. The symbols have their usual meaning.

- |   |   |    |     |
|---|---|----|-----|
| 1 | a) Discuss the scientific indications of the Holy Quran on Geology.   | 10 | CO2 |
|   | b) Write the scientific indications of the Holy Quran on Astronomy.   | 15 |     |
| 2 | a) Describe the “Golden Age of Islamic Civilizations” and the emphasis on the pursuit of knowledge.                                       | 15 | CO3 |
|   | b) Write The Contribution of Muslim Scholars on Technology.   | 10 |     |
| 3 | a) Discuss Muslim contributions on Medicine. State the story of Abu-Ali-Al-Husain Ibn Abdallah Ibn Sina (980-1037) and his contributions. | 15 | CO3 |
|   | b) What is the impact of Islamic Civilizations on Western Civilization?   | 10 | CO5 |
| 4 | a) Describe the importance and role of Astronomy in Islam.  | 10 | CO4 |
|   | b) Write a short Biography of Mohammad Bin Musa Al-Khawarizmi.  | 15 | CO3 |
| 5 | a) Illustrate the role of Muslim Scholars on Chemistry.   | 10 | CO3 |
|   | b) Who is Al- Biruni? Write his Contributions in various Branches of knowledge.   | 15 |     |
| 6 | a) Outline the transfer of knowledge of Islamic Science and Technology to the west.   | 10 | CO3 |
|   | b) What do you know about Ibn AL- Haytham? Describe his contributions to the various branches of knowledge of the modern world.           | 15 | CO4 |

**Program:** M.Sc.T.E. 2 Years 1<sup>st</sup> Semester  
**Semester:** Winter semester

**Date:** 07 December, 2022 (Wednesday)  
**Time:** 10:00 am – 01:00 pm

**ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)**  
**ORGANISATION OF ISLAMIC COOPERATION (OIC)**  
**DEPARTMENT OF TECHNICAL AND VOCATIONAL EDUCATION (TVE)**

**Exam:** Semester Final Examination  
**Course Number:** TVE 6113  
**Course Title:** Curriculum Development in TVE

**Academic Year:** 2021 – 2022  
**Full Marks:** 150  
**Duration:** 3 Hours

**There are 7 (seven) questions. Answer any 6 (six).**

**Figures in the right margin indicate marks of the question.**

1. a) What are the two main goals of education? 02
- b) "The term Curriculum has multiple meanings"- explain the statement in light of the definitions given by several authors such as Finch & Crunkilton, Wilson, D'Hainaut, etc. 15
- c) Describe the distinctive features of technical and vocational education and training (TVET) curriculum as compared to general education curriculum. 08
2. a) Compare and contrast among the following types of curriculum: 'Mastery/ Induction', vs. 'Developmental/ Constructive', and 'Vocational' vs. 'Academic'. 10
- b) Curriculum is structured in 'Subject Based Approach', 'Learning Field approach'. Illustrate the difference between these two approaches. 10
- c) How do you differentiate between: 05
  - i. Curriculum and Syllabus and
  - ii. Curriculum Systems and Instructional System.
3. a) Draw the Basic Design Model of a curriculum. State various primary data sources you should consider when making curricular decision. 05
- b) Describe any two of the following curriculum design approaches: 20
  - i. Individual Needs Approach,
  - ii. Subject Specialization Approach, and
  - iii. Social Demand/ Job Analysis Approach.
4. a) Describe how you can select a strategy for determining curriculum content. 10
- b) Describe the DACUM Approach for determining curriculum content. How does it differ from the 'All Aspects' of Industry Approach? Explain morality according to the Islamic perspective. 15
5. a) Describe different types of goals and objectives of curriculum. How do you specify the specific objectives or performance objectives? Give at least three examples from your area of specialization. 15
- b) Quality curriculum materials are essential for implementing curricula. State the definition of curriculum materials. Give at least three examples from each of three different categories of curriculum materials. 10
6. a) Competency-Based Training and Assessment (CBT&A) approach support 'School-to-work' transition. Define the term 'School-to-Work (STW) Transition'. STW may be described by three different but closely related components. What are these components? 05
- b) What are Industry competency standards? How are they made-up of? Design and develop a sample Unit of Competency (UoC) for any occupation based on any course content or learning field of your area of specialisation. You should define key terms you will use in the UoC form. 20
7. a) Describe the different stages of determining a Training Need (TN). 10
- b) Why do we assess curriculum? Explain in detail how you plan for curriculum assessment. 15



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Name of the Program: MSc.T.E. – 1<sup>st</sup> Semester

Date: 13 December (Tuesday), 2022  
Time: 10:00 am – 01:00 pm

**ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)**  
**ORGANISATION OF ISLAMIC COOPERATION (OIC)**  
**DEPARTMENT OF TECHNICAL AND VOCATIONAL EDUCATION (TVE)**

**Exam:** Semester Final Examination

**Winter Semester:** 2021-2022

**Course Number:** TVE 6125

**Full Marks:** 150

**Course Title:** Advanced Methods and Techniques of Teaching

**Time:** 3 Hours

There are **8 (Eight)** questions. Answer **6 (Six)** questions. The symbols have their usual meaning.

- 
- 1 (a) What is micro-teaching? Explain the following characteristics of micro-teaching: 15  
Recording, Reviewing, Responding, Refining, and Redoing.
  - (b) Discuss the cycle, flow chart, phases, advantages and limitations of the micro-teaching. 10
  - 2 (a) "The teaching that achieved instructional outcomes and learning outcomes perfectly 15  
called an effective teaching" – Derived the statement context of the outcome-based  
education (OBE).
  - (b) Explain – "Knowledge is power, but skills is your superpower: Context of IR 4.0". 10
  - 3 Derived the significance of teaching and learning in the 21th century in light of the following: 25  
*Flipped Classrooms, Active Learning Forum, MOOCs, Cloud Computing, Telepresence,  
Mobile Learning, E-books, Gesture-based Learning, Student Response Systems, and Learning  
Recode Storage.*
  - 4 "Didactic- an advanced teaching method for TVET". Discuss the statement in light of the 25  
following:
    - Achieving the SDGs
    - Achieving the skills of the 21th century, and
    - Achieving the goals of hybrid pedagogy
    - Achieving novelty in learning (e.g., integrating AI or machine learning).
  - 5 (a) "They may forget what you said but they will not forget how you made them feel" – 15  
Derived the statement in light of psychological principles of teaching and learning
  - (b) Discuss five theories of learning with examples. 10
  - 6 (a) "A lesson plan is defined as a plan of procedure developed by the teacher to be used as 15  
a guide in presenting content and one that provides a learning environment for students"  
– Narrate the statement in light of an effective planning of a lesson.
  - (b) Choose a topic from your field of specialization and design a lesson plan by using your 10  
preferable approach which you have studied in your class.
  - 7 (a) With a necessary diagram show and discuss identification of your students' learning 15  
style: by using learning matrix exist in the "Kolb's Learning Theory".
  - (b) Design a Table of Specification for conducting a summative test of your TVET 10  
institution: context of Bloom's cognitive domain in the Taxonomy.
  - 8 Design, analyze and recommend a model educational system holistically by incorporating the 25  
following components:
    - *Integration of TPACK in classroom teaching*
    - *Industry-academia coordination and collaboration*
    - *Quality assurance in teaching, research and development*
    - *Accreditation and ranking of your institution.*

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**Program:** M.Sc.T.E. 2 Years 1<sup>st</sup> Semester  
**Semester:** Winter semester

**Date:** 01 December, 2022 (Thursday)  
**Time:** 10:00 am – 01:00 pm

**ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)**  
**ORGANISATION OF ISLAMIC COOPERATION (OIC)**  
**DEPARTMENT OF TECHNICAL AND VOCATIONAL EDUCATION (TVE)**

**Exam:** Semester Final Examination  
**Course Number:** TVE 6153  
**Course Title:** Educational Research

**Academic Year:** 2021 – 2022  
**Full Marks:** 150  
**Duration:** 3 Hours

There are 8 (eight) questions. Answer 6 (six) questions. (Choose Your Six Questions in such so way that at least One CO1, CO2, and CO3 is being selected).  
The symbols have their usual meaning.

1. a) There are many reasons of conducting educational research in the area of technical, vocational and engineering disciplines. Identify five major areas from them and justify why these five areas need to be focused urgently. **15**
- b) One MScTE student selected a research problem (title): ‘Compare Male and Female students’ academic performance in an online course offered by the CSE department in 2021-2022 at IUT’ while he/she was conducting his/her thesis work. He/She was excited to find out the solution of that problem. However, his/her supervisor suggested him/her to check out the feasibility of investigating the problem. The supervisor suspected that there might be few challenges which could hinder to conduct this specific problem. **10**

Based on this background, what were the possible challenges that the student could encounter while he/she intended to investigate the stated problem? Give satisfactory evidence to support your answer. **CO1**

2. a) Differentiate between qualitative and quantitative research with highlighting five main separating aspects (features). **(CO2)** **13**
- b) Identify six main reasons (Objective) of conducting literature review in your MSc thesis **(CO1)**. **12**
3. a) What is evaluation research? Discuss the main features of evaluation research in technical education. **12**
- b) **Abstract:** The recent outbreak of the COVID-19 pandemic forced education institutes to shift to an internet- based online delivery mode. This unique situation accelerates a long-standing issue of digital inequality among the students in education and warrants a concentrated study to investigate students’ readiness for learning in online environment. This study developed an instrument to meticulously measure the students’ readiness for online learning in a pandemic situation. The proposed model consists of (a) motivation, (b) self-efficacy, and (c) situational factors. The proposed model was validated with the engineering students (for pilot study N = 68 and main study N = 988) from several universities in Bangladesh. To validate the underlying relationships between the latent constructs, an exploratory factor analysis (EFA) was performed followed by structural equation modelling (SEM) for the construct validity of the measurement model and to assess the model fit. The findings showed that besides motivation and self-efficacy, the situational factors describing the contextual dynamics emerging from the COVID-19 significantly influenced the student’s online readiness. We argue that digital inequality is an important factor influencing student readiness for online learning.
- i. Based on the features of Qualitative and Quantitative research, elaborate the type of research which this abstract fall into? **13**
- ii. Identify four features that support your answer. **CO2**



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- 4. a) A student of MScTE program wants to conduct research focusing on engineering teachers' perceptions of student-centered teaching in EEE department. The student needs 120 teachers as a sample from 300 teachers who are teaching in different universities in Bangladesh. There are 50 Professors, 75 Associate Professors, 100 Assistant Professors and 125 Lectures out of 300 teachers. Which sampling technique would be the best choice to get maximum representation of total population? Calculate the sample size for each category. 12
- b) How sampling bias may occur during conducting MSc thesis in technical education. 07
- c) Apply (draw) a research context where purposive sampling technique is important. 06
- CO3**
- 5. a) Distinguish between *primary* and *secondary* data sources considering a case of conducting MSc research. 10
- b) Write an example of a research problem where questionnaire is more appropriate than interview and provide your supporting reasons of choosing questionnaire over interview as a data collection technique. 15
- CO3**
- 6. a) MSc or PhD research problem should not have more than one independent variable and one dependent variable, do you agree with this statement? Justify your answer. 08
- b) Provide examples (techniques) from descriptive, inferential (Parametric and Non- Parametric) data analysis. Which one is used for generalizing the findings of your research? 05
- c) Determine the mean, median and mode of the following set of numbers: 12
  - i. 97, 66, 16, 78, 35, 58, 92, 68, 80, 56, 35, 68, 97
  - ii. 20, 14, 12, 19, 18, 16, 24, 28, 30, 44
- CO1**
- 7. a) Write a *research title* of your choice in the area of technical education. 03
- b) Why do you think your selected problem is an important area for investigation? 07
- c) Design the following methodological aspects to continue your research: 15
  - i. Selection of your research paradigm (qualitative or quantitative) and Provide justification of your selection **CO3**
  - ii. How do you collect your data for solving your research problem?
- 8. a) Why do you need to write your thesis while conducting MSc and PhD research? 07
- b) Applying appropriate reference in your research work is enhancing the acceptance of your work among the readers, do you believe this statement? Justify your answer. 08
- c) Discuss four main aspects (characteristics) that will ensure writing a good research report (thesis). 10
- CO3**

25)

**Program:** MScTE 2 Years 3<sup>rd</sup> Sem & PhdTE 1<sup>st</sup> Sem  
**Semester:** Winter semester

**Date:** 01 December, 2022  
**Time:** 10:00 am – 01:00 pm

**ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)**  
**ORGANISATION OF ISLAMIC COOPERATION (OIC)**  
**DEPARTMENT OF TECHNICAL AND VOCATIONAL EDUCATION (TVE)**

**Exam:** Semester Final Examination  
**Course Number:** TVE 6173  
**Course Title:** Adult Education

**Academic Year:** 2021 – 2022  
**Full Marks:** 150  
**Duration:** 3 Hours

There are 7 (seven) questions. Answer any 6 (six) questions.  
Figures in the right margin indicate marks of the question.

1. a) Compare between adult education and lifelong learning. 10  
b) Discuss the rationale for the provision of learning opportunities for adults. 15
2. a) “Adults learn and behave differently”. Explain ‘How and ‘Why’? 15  
b) “Adult education increasingly turns away from control didactics to empowerment didactics”. For What reason(s)? Explain. 10
3. Describe the teaching learning process model for the education of adult, which is proposed by Taba (1962, citing Giles et. al.1942). 25
4. a) Explain through diagram the determining factors of the learning capacity of adults. 10  
b) Describe the Learning Specialties of Adults you should consider when you design learning for adult. 15
5. a) State the major barriers to learning for adults. As an educator how you can help adult learners to overcome these barriers. Explain the causes and the measures you can take to overcome them. 15  
b) Explain through a diagram the Teaching Learning for Adults from the perspective of designing the process. 10
6. a) What are the preliminary factors you must consider while designing teaching-learning for adults. Explain them briefly. 10  
b) Explain the didactic principles for delivering course content for adult learning and education. 15
7. Write notes on the following terms:  
(i) Adult Learning and Education (ALE) and the 2030 Agenda for Sustainable Development and 25  
(ii) Changing the TVET paradigm: new models for lifelong learning.



Name of the Program: Ph.D. (T.E.) – 1<sup>st</sup> Semester

Date: 09 December (Friday), 2022

Time: 10:00 am – 01:00 pm

ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)  
ORGANISATION OF ISLAMIC COOPERATION (OIC)  
DEPARTMENT OF TECHNICAL AND VOCATIONAL EDUCATION (TVE)

Exam: Semester Final Examination

Winter Semester: 2021 - 2022

Course Number: TVE 6175

Full Marks: 150

Course Title: Entrepreneurship Education

Time: 3 Hours

There are 8 (Eight) questions. Answer 6 (Six) questions. (All questions carry equal marks)

- 
- 1 Design a bachelor level curriculum on the subject: “*Entrepreneurship Education*” by considering the following factors:
    - Barriers of entrepreneurship education
    - Motivational factors of the TVET graduates
    - Abilities and competencies of the TVET graduates
    - Professional development with technical know-how and business skills.
  
  - 2 “*An entrepreneur may not always be an innovator but an imitator who would be tempted to copy the success stories of others*”. Discuss the statement with the view to prepare a successful entrepreneur in light of the following:
    - Factors favoring growth of entrepreneurship
    - Inherent characteristics of become an entrepreneur
    - Acquisition of practical skills, attitude, understanding and business knowledge
    - Inhibiting factors to accelerate the process of industrialization.
  
  - 3 *The last decade of the 20<sup>th</sup> century, and the first decade of the 21<sup>th</sup>, have witnessed numerous and diversified initiatives to develop entrepreneurship in all countries, both developed and developing.* Derived the proven role of TVET to develop entrepreneurial skills in light of the following features:
    - Innovation, training, retraining, inventing and reinventing TVET
    - Entrepreneurial abilities and activities in TVET
    - Creation of new ventures in preparation for world of work
    - Creative thinking, problem solving, networking, leadership and teamworking.
  
  - 4 Design a business plan or social business idea in context of socio-economic conditions of your country by using the following ingredients:
    - Place, people, product, price, and promotion
    - Available market, suppliers, customers and competitors
    - Skills, traits and qualities which make the enterprise success
    - Plan to lead, negotiation skills, and confliction resolving skills.
  
  - 5 Discuss the managerial roles in entrepreneurship through TVET by considering of the following factors:
    - Managerial abilities, investment, risk-taking steps and sustainability
    - Phases of development of small enterprises (Pre-start-up, Start-up, Survival, First growth)
    - Commitment, control of resources and to enhance entrepreneurial culture.
  
  - 6 Narrate the approaches of quality management for ensuring quality in entrepreneurship education.
  
  - 7 “*Studies have revealed a positive correlation between entrepreneurship and aggregate economic growth of the business community from OIC developing countries need to have a common platform to promote entrepreneurship which might be a key to poverty alleviation, peace and prosperity*”.
    - What is poverty? Define concept from the above-mentioned statement on poverty alleviation.
    - State some successful stories of microcredits movement for entrepreneurs development.
    - How entrepreneurs assist OIC developing countries to improve human resources?
  
  - 8 “*Entrepreneur is a person of telescopic drive with talented pool from man and women who perceives business opportunities and promptly seizes them for exploitation.*”
    - Do you agree with the statement? Explain.
    - How can entrepreneurship help to empower women?
    - Define a concept of entrepreneurship development so that underprivileged people can be exposed to possibilities of job giver instead of job seekers.

**Program:** MScTE 2-Yr, 3<sup>rd</sup> Sem.  
**Semester:** Winter semester

**Date:** 01 December, 2022  
**Time:** 10:00 am – 01:00 pm

**ISLAMIC UNIVERSITY OF TECHNOLOGY (IUT)**  
**ORGANISATION OF ISLAMIC COOPERATION (OIC)**  
**DEPARTMENT OF TECHNICAL AND VOCATIONAL EDUCATION (TVE)**

**Exam:** Semester Final Examination **Academic Year:** 2021 – 2022  
**Course Number:** TVE 6371 **Full Marks:** 150  
**Course Title:** Systems Approach in Technical Education **Duration:** 3 Hours

There are 8 (eight) questions. Answer any 6 (six) questions. The symbols have their usual meaning.

1. a) What is a systems approach? Describe in detail the major steps involved in systems approach. **15**  
b) State the essential characteristics of the systems approach. **10**
2. a) Discuss briefly the concept of interfacing in terms of the systems approach. Explain briefly the key elements of an organization. **15**  
b) With a diagram explain how the organization acts as a system with interrelated subsystems. **10**
3. a) Explain with a diagram the integration of systems concepts within systems approach. **15**  
b) Justify that educational institutes such as universities or schools must exit as an open system. **10**
4. a) Explain briefly the concept of ergonomics in the context of Technical Education. How does Ergonomic work as a systems approach? **10**  
b) Discuss briefly the different approaches of ergonomics that influence workplaces. **10**  
c) Discuss briefly the advantages and disadvantages of ergonomics within a systems approach. **05**
5. a) Define the concepts of systems analysis. How does it work in an educational organization? **15**  
b) Describe the major steps involved in systems analysis. **10**
6. a) Discuss the concept of the system theory of management. **10**  
b) Explain the different important features of a systems approach to management thought. **10**  
c) What are the limitations of the systems approach in the context of the theory of management? **05**
7. a) Explain with a diagram the organization as a composite of 'strategic, coordinating, and operating subsystems'. **15**  
b) Discuss in detail the functions of boundary-spanners or BRP with a suitable example in terms of technical education. **10**
8. a) Discuss briefly the interrelationship between the systems approach and educational technology to enrich the learning outcomes in educational institutions. **10**  
b) Explain briefly the major steps of the systems approach which enhance to use of educational technology. **15**