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**Presidency University**

**Bengaluru**

**SCHOOL OF ENGINEERING**

**END TERM EXAMINATION – AUGUST 2024**

**Semester** : 2nd Semester

**Course Code**: CIV5007

**Course Name**: Construction Economics & Contract Specifications

**Program** : M.Tech BCT

**Date**: 14 /Aug / 20241

**Time**: 09:30AM – 12:30PM

**Max Marks**: 100

**Weightage**: 50%

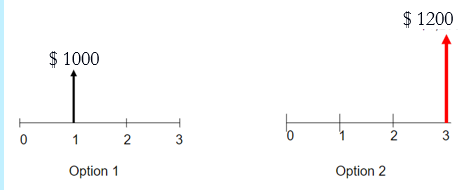
**Instructions:**

1. *Read the all questions carefully and answer accordingly.*
2. *Do not write any matter on the question paper other than roll number.*
3. *Scientific and Non-programmable Calculators are permitted.*

**PART A**

**ANSWER ANY 3 QUESTIONS. (3Qx 5M= 15M)**

1. At what interest rate are these two transaction options equal? (C.O.No.1) [Knowledge]

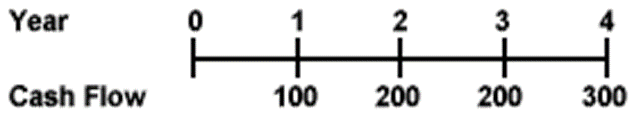


2. Define Break-even point and construct a break-even chart. (C.O.No.2) [Knowledge]

3. Define Breach of a contract and discuss its types? (C.O.No.3) [Knowledge]

4. Discuss the various elements of a contract. (C.O.No.3) [Knowledge]

5. Find the Present value for the following Cash flow stream given that the interest rate is 10%.



(C.O.No.1) [Knowledge]

**PART B**

**ANSWER ANY 4 QUESTIONS. (4Qx10M=40M)**

6. A Sports apparel company has initiated a logo-licensing program. It expects to realize a revenue of $80,000 in fees next year from the sale of its logo. Fees are expected to increase uniformly to a level of $200,000 in 9 years. Construct the cash flow diagram and determine the arithmetic gradient. (C.O.No.1)[Comprehension]

7. Working capital management is a process through which a company utilizes its current assets and liabilities in the best possible manner to ensure operational effectiveness. What are the different components of WCM? Discuss its objectives. (C.O.No.2) [Comprehension]

8. A tender document is a formal invitation sent to the potential suppliers to submit a proposal for a project or contract. The document outlines the terms and conditions of the project, as well as the evaluation criteria that will be used to select the successful bid. Based on your understanding, what are the different types of Tenders and write in brief the processes involved in tendering? (C.O.No.3) [Comprehension]

9. Conditions of a contract can be expressed as a requirement where one or both parties must comply. In any contract composition, there are two documents that are inevitable. A General condition (GCC) is one that is common and included in most contracts. Special conditions (SCC) are those that are specific to that contract. As per the FIDIC, write the clauses covered under GCC and SCC (ten each). (C.O.No.3) [Comprehension]

10. Prepare a Profit and Loss Account for the year ended 31st March 2021.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S. No** | **Particulars** | **Amount in Rs.** | **S.No** | **Particulars** | **Amount in Rs.** |
| 1 | Gross Profit | 100000 | 11 | Bad Debts | 1500 |
| 2 | Manager salary | 30000 | 12 | Rent Received | 1000 |
| 3 | Office Lighting | 5000 | 13 | Advertising Charges | 25000 |
| 4 | Office Rent | 15000 | 14 | Discount allowed | 3000 |
| 5 | Discounts Received | 4000 | 15 | Package Charges | 7500 |
| 6 | Local taxes | 1000 | 16 | Depreciation charges | 10000 |
| 7 | Salesmen Salary | 20000 | 17 | Repairs and Maintenance | 2500 |
| 8 | Legal Charges paid | 3000 | 18 | Interest on Loans | 1500 |
| 9 | Commission charges paid | 10000 | 19 | Interest on loans Received | 500 |
| 10 | Dividends Received | 2000 |  |  |  |

(C.O.No.2) [Comprehension]

11. Any disagreement or problem may arise during the formation or performance of the contract. The contract issue could be something as small as a misunderstanding about the terms of the agreement, or it could be something much larger, such as one party not holding up their end of the bargain. Discuss on different Contract issues that one might have while working on a construction project. (C.O.No.3) [Comprehension]

**PART C**

**ANSWER ANY 3 QUESTIONS. (3Qx15M=45M)**

12. A delivery truck was purchased by Anton on January 1, 2022. The truck costs $20000 with a useful life of 5 years. The Expected salvage value for the truck is $2000. The expected Miles used were 80,000. (C.O.No.2) [Application]

|  |  |
| --- | --- |
| Year | Units of Activity in Miles |
| 2018 | 15000 |
| 2019 | 30000 |
| 2020 | 20000 |
| 2021 | 25000 |
| 2022 | 10000 |

Prepare Schedule of Depreciation on the basis of following methods

1. Straight Line Method
2. Units of Output Method
3. Double Declining Balance Method

13. From the following particulars presented below in the table, Prepare a ***Profit and Loss account*** for M/s Sports Equipments for the year ended March 31, 2021: (C.O.No.2) [Application]

|  |  |  |
| --- | --- | --- |
| Gross Profit -₹100000 | Bad debts - ₹2000 | **Adjustments:**   1. Outstanding Salaries = ₹4000 2. Rent paid for 11 months 3. Interest due but not received=₹2000 4. Prepaid insurance = ₹2000 5. Depreciate Plant and machinery by 10%p.a 6. Further bad debts amounted to ₹2000 and make a provision for bad debts @5% for Sundry Debtors 7. Commissions received in advance = ₹2000 |
| Rent - ₹22000 | Provision for Bad Debts (1/04/2020) -₹4000 |
| Salaries - ₹10000 | Sundry Debtors- ₹40000 |
| Commission credited- ₹12000 | Discounts Received- ₹2000 |
| Insurance paid- ₹8000 | Plant and Machinery- ₹80000 |
| Interest received-₹6000 |  |

14. During the execution of the project, there is a high chance that the contractor fails to satisfy the client due to differing expectations and aims, eventually leading to conflicts. This may lead to claims made by the client under contract who has incurred losses during the process. Discuss the different types of Construction Claims and their causes. (C.O.No.3) [Application]

15. From the following particulars, Prepare a balance sheet for Mr. Ankith for the year ended 31st March, 2020. (C.O.No.2) [Application]

|  |  |  |
| --- | --- | --- |
| Capital - ₹200000 | Bills payable - ₹20000 | **Adjustments:**   1. Outstanding Liabilities for 2. Salaries = ₹10000 3. Wages = ₹20000 4. Interest on bank overdraft = ₹3000 5. Interest on bank loan = ₹6000 6. Provide interest on capital @10% p.a 7. Depreciation on Plant and Machinery by @10% p.a 8. Bad debts amounted to ₹10000 and make a provision for bad debts @10% for Sundry Debtors 9. Closing stock =₹1,20000 10. Net profit for the year = ₹96000 considering all the above adjustments |
| Drawings-₹40000 | Goodwill- ₹60000 |
| Cash in Hand - ₹15000 | Sundry Debtors- ₹80000 |
| Loan from Bank - ₹40000 | Plant and Machinery- ₹80000 |
| Sundry Creditors - ₹40000 | Land and Building- ₹50000 |
| Bank Overdraft-₹20000 | Investment-₹20000 |
| Bills Receivable- ₹10000 | Cash at Bank-₹25000 |

16. A Good Contract document helps in resolving misunderstandings before they escalate into disputes. It is the result of careful preplanning and a concerted effort at all levels of the field organization. List the Composition of a Contract and write in brief about the types of specifications that can be included in a contract. (C.O.No.3) [Application]