

UNIVERSITY OF KERALA
SCHOOL OF DISTANCE EDUCATION
First Semester B.Sc Mathematics -2020 Admission
Assignment Questions

I. Statistics

1. Calculate the median of the distribution of marks obtained by 80 students given below.

Marks	0 -10	10- 20	20-30	30-40	40-50	50-60
Frequency	3	9	15	30	18	5

2. Calculate the geometric mean of the following observations:

2574, 475, 75, 5, 0.8, 0.08, 0.005, 0.009.

3. Find the standard deviation of the following observations by the direct method and the shortcut method.

20, 25, 35, 40, 15, 10

4. The first four moments of a distribution about the value “5” of a variable are 2, 20, 40, 50. Obtain the mean, second, third and fourth central moments.

5. For a group of 10 items $\sum x = 452$, $\sum x^2 = 242$ and mode=43.

Find the Pearson co-efficient of skewness.

6. Find the missing value x , for the following data, if the mean of the data is 10.20

observations	5	8	x	12	13	15
frequency	7	13	22	10	7	4

7. Height and weight of 10 students of a college is given below. Use Karl Pearson's coefficient of correlation to check whether height and weight are correlated

Height	140	130	152	148	150	160	162	140	150	148
weight	40	38	45	42	42	55	50	46	48	45

II. FUNDAMENTALS OF FINANCIAL ACCOUNTING

QUESTIONS

1. Journalise the following transactions

- 2021 March 1: Admin started business with Rs.10,000
- „ 2: Purchase furniture for cash Rs.2,000
 - „ 3: Purchased good for cash Rs. 4,500
 - „ 4: Purchase goods from John on credit Rs. 6,000
 - „ 5: Sold goods for cash Rs.5,000
 - „ 6: Sold goods to Jose on credit Rs.6,000
 - „ 9 : Paid for stationery Rs. 200
 - „ 11: Paid for advertisement Rs.3,000
 - „ 15: Sold goods Rs.2,400
 - „ 21: Purchase goods Rs.1,100
 - „ 28: Paid John Rs.3,000
 - „ 29: Received from Jose Rs.4,500
 - „ 30: Paid Rent Rs.300
 - „ 30: Paid salary Rs. 400
 - „ 31: Received commission Rs.200
 - „ 31: Withdrew for domestic use Rs.300

2. Explain accounting concepts and conventions.

3. Enter the following transactions in the Double column Cash Book of Tarun

2021	Rs.
March 1 Opening Balance	
Cash in hand	300
Cash at bank	3,200
2 Sold goods for Cash	4000
4 Purchased goods for cash	3,000
6 Deposited cash into bank	800
8 Withdrew cash from bank	1,400
12 Purchased stationery	300
15 Paid to Sanjay by cheque	4,600
18 Rent paid by cheque	900
21 Received cheque from Suraj	2,000
22 The cheque from Suraj paid into bank	2,000

25 Drew cash for domestic purpose	400
28 Salary paid by cheque	1200
31 Cash Sales	4,100
Paid into bank	4000

4. What is Trial Balance? Explain the objectives and preparation of Trial balance.

III. MATHEMATICS

Assignment Questions

- If a and b are two natural numbers such that $(a, b)=6$, $[a, b] = 36$. What can a and b ?
- Solve $12x \equiv 5 \pmod{47}$.
- Describe the domain and range of the function $y = x\sqrt{9 - x^2}$.
- Let $f(x) = x^2 + 3$, $g(x) = \sqrt{x}$. Find 1) $(f \circ g)(x)$ 2) $(g \circ f)(x)$ and state their domains.
- Find the slope intercept form of the equation of the line with the conditions that the line is perpendicular to $y=5x+9$ and y - intercept=6.
- Find all the points of discontinuity of the function f defined by $f(x) = \begin{cases} x + 2 & \text{if } x < 1 \\ 0 & \text{if } x = 1 \\ x - 2 & \text{if } x > 1 \end{cases}$
- Let $f(x) = \begin{cases} x^2 \sin \frac{1}{x} & x \neq 0 \\ 0 & x = 0 \end{cases}$
 - Show that f is continuous at $x = 0$
 - Find $f'(0)$
 - Find $f'(x)$, for $x \neq 0$
 - Show that f' is not continuous at $x=0$
- Use implicit differentiation to find $\frac{d^2y}{dx^2}$ if $4x^2 - 2y^2 = 9$
- If $f(x) = x^2 - 5x + 6$. Then find
 - The intervals on which f is increasing
 - The interval on which f is decreasing
 - The open intervals on which f is concave up
 - The open intervals on which f is concave down
 - The x coordinate of all inflection points
- Generate or sketch of graph $y = 6x^{\frac{1}{3}} + 3y^{\frac{4}{3}}$ and analyse it

Language Course 1 LISTENING, SPEAKING AND READING

Common for B.A/BSc [EN 1111.1] & B.Com [EN 1111.2]

Assignment (8 to 10 pages)

Write an essay on the organs of speech and speech mechanism.

Or

Analyse the relevance of the title of the play *The Pie and the Tart* (10 marks)

Case Analysis (5 pages)

Explain the Sub-skills of Reading. (10 marks)

Foundation Course 1 Perspectives on Contemporary Issues: EN 1121

Common for all BA/BSc Programmes

Assignment (8 to 10 pages)

Comment on the significance of the title "Goddess of Revenge".

Or

Alcoholism as a social evil. (10 marks)

Case Analysis (5 pages)

Discuss the need for going local in a globalized world. (10 marks)

BA/B Sc Additional Language HINDI
First Semester HN 1111.1 Course I – Prose and One Act Plays
2020 Admission

ASSIGNMENT TOPICS

किन्हीं चार पर आलोचना कीजिए : (10 marks)

1. मन्त्र –प्रेमचंद
2. शिष्टाचार-भीष्म साहनी
3. चोरी और प्रायश्चित्त-महात्मा गांधी
4. जीवन निर्माता अध्यापक- जगदीश चन्द्र माथुर
5. मैं नरक से बोल रहा हूँ- हरिशंकर परसाई

Case Analysis

किन्हीं चार पर आलोचना कीजिए | (10 marks)

1. अंडे के छिलके –मोहन राकेश
2. महाभारत का एक सांच –भारत भूषण अग्रवाल
3. बहू की विदा –विनोद रस्तोगी
4. हिन्दी एकांकी का उद्भव और विकास
5. एकांकी और नाटक का अंतर

ബി.എ/ബി.എസ്.സി- ഒന്നാം സെമസ്റ്റർ

അഡീഷണൽ ലാംഗ്വേജ്- മലയാളം

അസൈൻമെന്റ്

ആധുനിക കവിത്രയത്തിന്റെ കവിതകൾ മലയാളകവിതയുടെ ഇടവെയ്പ്പാകുന്നതെങ്ങനെ?

അല്ലെങ്കിൽ

എഴുത്തച്ഛന് മലയാളഭാഷയുടെ പിതൃത്വം ആരോപിക്കുന്നതിന്റെ ഔചിത്യം പരിശോധിക്കുക.?

പ്രശ്നാപഗ്രഥനം (Case Analysis)

മലയാളകവിതയിലെ കാല്പനിക സ്വരങ്ങൾ - വിശകലനം ചെയ്യുക.

അല്ലെങ്കിൽ

ഉത്തരാധുനിക കവിതയുടെ സവിശേഷതകൾ വിലയിരുത്തുക.