

**NATIONAL INSTITUTE OF TECHNOLOGY DURGAPUR**  
**Odd Semester Mid-term Examination, 2023-24**

Course Code: HSC01

Full Marks: 20

Course Name: Professional Communication

Time: 90 Mins

Question Paper No.: NITDGP/HSC01/

Date of Exam: 19/10/2023

Instructions: Answer all the questions.

Question No.	Body of the Question	Marks	Mapped CO
1	<p><b>Read the passage and answer the following questions:</b></p> <p>The Chinese had to face the problem of protecting themselves against hordes of uncivilized tribes. Not content with building a great barrier-wall, hundreds of miles long, they sent out strong expeditions to punish the Huns, the raiding tribe of central Asia. These Mongal hordes then decided to try their luck in the West. Perhaps central Asia was becoming too dry to produce abundant grass. They were wandering herdsmen, ever needing fresh grasslands for their cattle and horse. Their women and young children travelled in wagons drawn by several pairs of oxen. The men and boys rode ponies and hardly ever got down. When they found good grass, they would settle down for a time and live in large tents. When they had to find fresh pastures they would ride great distances, getting down only to sleep, eating now and then a mouthful of cheese or a strip of raw meat. They were short, thickset men with broad shoulders and curved legs. Their heads were big and ugly, with small, slanting eyes, very flat noses and huge mouths. Their voices were shrill and savage. In peace, their ways were kindly, if rough. But in the excitement of battle, a mad lust for blood and destruction possessed them.</p> <p>a) Who were the Huns? Describe their appearance?  b) Why did the Huns decide to move towards the West?  c) How did the Chinese get rid of the raiding tribe from Central Asia?</p>	2+2+1=5	CO2
2	<p><b>Write the sentences with the correct verb forms.</b></p> <p>1. The jury _____divided in the case of reservation policy. (was/were)  2. Cattle _____grazing in the ground. (is/am/are)  3. Either Santanu or I____to do this work. (am/is/are)</p>	½X10=5	CO1

	<p>4. Two-thirds of the book_____rubbish. (was/were)</p> <p>5. Nirmal, together with his friends,_____football every day. (play/plays)</p> <p>6. The audience _____ (has/have) expressed its displeasure about the proceedings of the events.</p> <p>7. Many a student_____drowned in the barrage. (was/were)</p> <p>8. My spectacles _____quite costly. (is/are)</p> <p>9. The captain along with his soldiers_____marching ahead. (is/am/are)</p> <p>10. The Professor and Head ____on leave (is/am/are)</p>		
3	<p><b>Write the sentences with the correct form of Article (a/an/the/none):</b></p> <p>1. The Professor and _____Head are on leave.</p> <p>2. _____number of students is very small. (a/an/the/none)</p> <p>3. Darjeeling is a beautiful hill station in _____Himalayas.</p> <p>4. She has already read_____few books that are on the shelf.</p> <p>5. My daughter knows how to play_____harmonium.</p> <p>6. Sayan embarks on a new journey as_____university student.</p> <p>7. _____rich should be kind and helpful.</p> <p>8. We need _____heir to this property.</p> <p>9. Christians go to ____church every Sunday.</p> <p>10. _____great many students have been declared successful.</p>	½X10=5	CO1
4	Write an application letter to the Director of the institute for developing one cinema hall at the institute.	5	CO2

**Course Outcomes:**

CO1: Learners will acquire linguistic proficiency in terms of improvement in their listening, speaking, reading, and writing skills.

CO2: Learners will acquire better communicative ability.

CO3: The course will help learners improve their social connectivity skill.



**NATIONAL INSTITUTE OF TECHNOLOGY DURGAPUR****Odd Semester Mid-Term Examination, 2023-24**

Course Code: HSO541

Full Marks: 25

Course Name: Statistical Techniques for Economics

Time: 90 Minutes

**1. Answer any FIVE (05) questions. (CO1 & CO2)****5×1=5**

- Define Inter Quartile range.
- When a distribution is called platykurtic?
- Give Pearson's second measure of Skewness.
- What is the frequency formula for standard deviation?
- What does the area of a histogram represent?
- If the value of  $r_{xy} = -1$ , then what can you say regarding the relationship between x and y?
- Define seasonal variation.
- What is frequency density?

**2. Answer any TWO (02) questions.****2×5=10**

- Ten students obtained the following marks in mathematics and statistics. Calculate the rank correlation coefficient. (CO2)

X	100	110	115	116	120	125	130	135
y	18	18	17	16	16	15	13	10

- Show that for a two variable case correlation coefficient is independent of change of both origin and scale. (CO1)

- Find Standard Deviation of the following data. (CO2)

X	30-35	35-40	40-45	45-50	50-55	55-60	60-65	65-70
y	3	9	15	27	18	12	9	7

**3. Answer any ONE (01) question.****1×10=10**

- Obtain the equations of two lines of regression for the following data. Also obtain the estimate of X for y=70. (CO2)

X	65	66	67	67	68	69	70	72
y	67	68	65	68	72	72	69	71

- Find out 4 year moving average of the following table. (CO2)

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Value	362	358	352	347	340	331	333	330	325	322	320	317	319	318

**Course Outcomes**

CO1: Develop an understanding about the basic concepts of statistics.

CO2: To be able to apply various statistical tools in analyzing fundamental economic problems.