OLD QUESTION PAPERS

SEMESTER EXAMINATION NOV/DEC-2021

(REGULATION -2014 & 2021)

INDIAN INSTITUTE OF HANDLOOM TECHNOLOGY

BARGARH/GUWAHATI/FULIA/JODHPUR/SALEM/VARANASI/CHAMPA/KANNUR/KHTI-GADAG/SPKM-IIH-VENKATAGIRI

Diploma in Handloom & Textile Technology

SEMESTER EXAMINATION- Nov/Dec-2021

(Regulation-2021)

Year/Semester: 1st Sem.   **Time: 90 Minutes**

Subject Code & Name: HS101: English & Communication Skills   **Max. Marks: 40**

PART-A   (4×2=8 marks)

Answer any **four** questions within **two** or **three** sentences.

1) What is 'verbal communication'?
2) Explain 'emotional intelligence' as an important life skill.
3) What is E-mail?
4) Write one word for each of the sentences given below:
   a) People working together in the same office or department
   b) Study of environment
5) Identify the following lines and name the poem from which these have been taken:

   > The woods are lovely, dark and deep,
   > But I have promises to keep,
   > And miles to go before I sleep,
   > And miles to go before I sleep

PART-B   (4 X 8 = 32 marks)

Answer **any four** questions from Q.No 6 to 10 in detail. **Either A or B** has to be answered in each question.

6). A. Define communication. Mention its factors and explain the process of communication.

OR

B. Explain the 7 Cs for effective communication.

7). A Define soft skills . Describe five soft skills in one sentence each.

OR

B. Explain the importance of 'Time management' and 'Leadership skill' as soft skills.

8). A Read the lines given below and answer the questions that follow:

Where tireless striving stretches its arms towards perfection;

Where the clear stream of reason has not lost its way into the dreary desert sand of dead habit;

Where the mind is led forward by thee into ever-widening thought and action—

Into that heaven of freedom, my Father, let my country awake

   i. Write the name of the poem from which the above lines have been taken.

ii.   What is the meaning of the word 'striving' in the above lines?

OR

B Read the passage given below and answer the questions that follow:

Swami is a small child in Malgudi living with his family and grandmother. Once while reading a newspaper, his father reads an article about bravery shown by an 8-year old boy and feels that Swami should do something like that. Swami has the habit of sleeping with his grandmother after listening a story told by her. This irritates Swami's father. Swami's father then challenges, or rather forces, him to sleep in his office. When Swami tells his friends of the ordeal, his friends warn him about a ghost living near the office. When Swami sleeps in his father's office he has nightmares about the ghost and wakes up with a start. At the same time, Swami spots an intruder breaking into the office. Mistaking him for the ghost, Swami grabs the intruder's leg and yells for help. The rest of the villagers rush inside the office and catch the intruder. The police tell Swami that the intruder was a thief wanted by the police and congratulate him. The incident is published in the Malgudi times but little Swami is so scared after the incident that he starts sleeping with his grandmother again.

i.   Who is the author of "Malgudi Days"?
ii.   Who is Swami?
iii.   What challenge did Swami's father give him?
iv.   After the nightmare with whom Swami started sleeping?

9). A Read the passage given below and summarise it by giving appropriate title:

Letters are invaluable means of keeping our friendship with those who are away. Without the interchange of letters our absent friends and relations would be practically dead to us. We might learn from books, the surroundings in which they dwell or hear from travellers about the prosperity or failure, but it is through letters that we can converse with them as often as we want and obtain a clear picture of what they are doing or thinking and of everything in the distant lands in which they live.

OR

B. Write a letter to your friend asking him to visit your place during summer vacation.

10). A Pick out the Nouns in the following sentences:

i.   Cows are grazing.
ii.   He went to Kanpur.
iii.   Army marched forward.
iv.   We attended the party.

OR

B Change the following sentences into their Negative forms:

i.   He speaks Hindi.
ii.   Mohan plays cricket.
iii.   I saw a dog in the street.
iv.   Radha danced well.

****

INDIAN INSTITUTE OF HANDLOOM TECHNOLOGY

BARGARH/GUWAHATI/FULIA/JODHPUR/SALEM/VARANASI/CHAMPA/KANNUR/KHTI-GADAG/SPKM-IIH-VENKATAGIRI

Diploma in Handloom &Textile Technology

SEMESTER EXAMINATION-Nov/Dec-2021

(Regulation-2014/Regulation-2021)

Year / Semester: SIXTH SEMETSER

Time: 90 minute

Subject Code & Name: 6.1 WEAVING TECHNOLOGY AND TEXTILE CALCULATION-V

Max.Marks:40

PART-A

(4×2=8 marks)

Answer any four questions. The answer shall be within 2 or 3 sentences:-

1. Name any two states where traditional handloom silk sarees are produced.
2. Name any two Different harness design ties used in handloom jacquard weaving.
3. What do you mean by selling price of the fabric?
4. Write the formula to calculate count of warp yarn in the required cloth, When ends per inch in the fabric are required to be changed.
5. Name any two types of wastages considered while calculating the weight of warp or weft.

PART-B

4 X 8 = 32 marks

Answer any four questions from Q.No 6 to 10 in detail. Either A or B has to be answered in each question.

6. A. Explain the Jala weaving technique used in Banaras handloom saree weaving. (8)

    (OR)

    B. Explain in details about the weft tie and dye weaving technique. (8)

7. A. With suitable illustration explain any one of the harness design tie used in the jacquard weaving. (8)

    (OR)

    B. A fabric is woven with 96 harness cords per inch in a 400 hook jacquard loom, The width of the harness cords tied up in the body portion is 50 inches. The design tie used is Straight harness tie. How many harness cords are to be tied up on each body hook? (8)

8. A. A cloth is woven with 40^s Ne warp and 56^s Ne weft. It contains 68 EPI and 60 PPI what should be the ends and PPI that the fabric will contain 80^s Ne warp and 100^s Ne weft being used to have the same cover factor. (8)

    (OR)

    B. A plain cloth contains 80 Ends of 100^s Ne yarns per inch. Calculate the no. of Ends per inch to be required the same firmness, if a 64^s Ne yarn is used. (8)

9. A. A cloth 44.5 inches wide on a 72^S ST reed is woven with 32^s warp and 40^s weft and 64 PPI. Selvedge $\frac{1"}{4}$ each sides are drawn 4 ends/dent. The count of the selvedge yarn is same as the warp yarn. The length of the piece is 40 yards, if the regain of warp is 5% calculate the following :   (8)

    a) Total No of ends in the warp.
    b) Total length of warp in hank.
    c) Total weight of warp in piece.
    d) Total weight of weft yarn in the piece.

(OR)

B. Calculate the weight of warp and weft in kg of cotton woven fabric measuring 100 meters with following particulars.   (8)

Count of warp and weft yarn	- 10 Tex x 15 Tex
Ends per cm X picks per cm	- 28 x 24
Warp and weft crimp	- 4% X 6%
Width of the fabric	- 91 cm

Selvedge is drawn 4 ends in a dent, having width of 0.5 cm on both side of the fabric

---

10 (A) Calculate selling price per metre of the fabric by considering the following particulars.   (8)

Cloth Length	-100 metres
Weight of warp consumed including wastage	-3.350 kg
Weight of weft consumed including wastage	-3.515 kg
Cost of warp yarn	-Rs. 260 per kg
Cost of weft yarn	-Rs. 230 per kg
Warp Preparatory charges	-Rs. 40 per kg
Weft preparatory charges	-Rs.30 per kg
Dyeing charges for warp and weft	-Rs. 80 per kg
Weaving charges	-Rs. 20 per metre
Overhead charges	-@ 15% on the base cost
Margin profit	- 30%

(OR)

(B) Calculate selling price per metre of the fabric by considering the following particulars.

Cloth Length	-100 yards
Weight of warp consumed including wastage	-3 Pound
Weight of weft consumed including wastage	-3 Pound
Cost of warp yarn	-Rs. 250 per kg
Cost of weft yarn	-Rs. 200 per kg
Warp Preparatory charges	-Rs. 40 per kg
Weft preparatory charges	-Rs. 25 per kg
Dyeing charges for warp and weft	-Rs. 90 per kg
Weaving charges	-Rs. 15 per metre
Overhead charges	-@ 10% on the base cost
Margin profit	- 25%

****

INDIAN INSTITUTE OF HANDLOOM TECHNOLOGY

Bargarh/Fulia/Guwahati/Jodhpur/Salem/Varanasi/Champa/Kannur/KHTI-Gadag/SPKM-Venkatagiri

Diploma in Handloom & Textile Technology

SEMESTER EXAMINATION - November/December-2021

(Regulation-2021)

Year / Semester	: 1 / 1	Time : 90 Minutes
Subject Code & Name	: **BS101** : Mathematics - I	Maximum Marks: 40

PART-A (4×2=8 marks)

Answer any four questions. The answer shall be within 2 or 3 sentences:-

1. Find the value of $\cos 75°$ (2)

2. Find the value of $\lim\limits_{x \to -2} (3x^4 + 2x^2 + x - 1)$ (2)

3. If $^np_r - 11880$, $^nc_r - 495$, Find the value of r. (2)

4. Write the Statement of Baye's theorem. (2)

5. Find the mean value of 120,127,152,157,160,134,137,123,140,144. (2)

PART-B (4 X 8 = 32 marks)

Answer any four questions from Q.No 6 to 10 in detail. Either A or B has to be answered in each question.

6. A. If $A+B = 45°$ Prove that $(1 + \tan A)(1 + \tan B) = 2$, Then find the value of $\tan (22\frac{1}{2})°$ (8)

(Or)

B. Prove that $\sin 3A = 3 \sin A - 4 \sin^3 A$ (8)

7. A. Find $\frac{dy}{dx}$, when $y = \frac{\sqrt{x}-1}{\sqrt{x}+1}$ with respect to x. (8)

(Or)

B. Differentiate, $y = \frac{e^x + \cos x}{1 - \sin x}$ with respect to x. (8)

8. A. Find the expansion of $(2x + 3)^5$ by using Binomial theorem. (8)

(Or)

B. Find the middle term in the expansion of $(x + y)^6$. (8)

9. A. State and Prove addition theorem of probability. (8)

(Or)

B. Suppose there are three box, First box containing 2 white and 3 black balls, Second box containing 3 white and 2 black balls and Third box containing 4 white and 1 black balls. There is equal probability of each box. One ball is drawn at random. What is the probability that a white ball is drawn? What is the probability that white ball is drawn from first box? (8)

10. A. Given below are the values of sample mean $\bar{X}$ and sample range R for 10 samples, each of size 5. Draw the mean chart and commend on the state of control of process. (8)

(Or)

B. A textile unit produces special clothes and pack them in rolls. The number of defect found in 20 rolls is given below. Find whether the process is in control by using "C -Chart". Defects in 20 rolls are 12,14,7,6,10,10,11,12,5,18,12,4,4,9,21,14,8,9,13,21. (8)

Table : Quality Control - Chart Constants

Sample Size	Chart for average $\bar{X}$-chart			σ-shart — Chart for Standard Deviations					Chart for Ranges — R-chart				
	Factors for Control Limits			Factors for Central line	Factors for Control Limits				Factors for Central line	Factors for Control Limits			
n	A	A₁	A₂	C₂	B₁	B₂	B₃	B₄	d₂	D₁	D₂	D₃	D₄
2	2.121	3.760	1.880	0.5642	0	1.843	0	3.267	1.128	0	3.686	0	3.262
3	1.732	2.394	1.023	0.7236	0	1.858	0	2.568	1.663	0	4.358	0	2.575
4	1.500	1.880	0.729	0.7979	0	1.808	0	2.266	2.059	0	4.698	0	2.282
5	0.342	1.596	0.577	7.8407	0	1.756	0	2.089	2.326	0	4.918	0	2.115
6	1.225	1.410	0.483	0.8686	0.026	0.711	0.030	1.970	2.534	0	5.078	0	2.004
7	1.134	1.277	0.419	0.8882	0.105	1.672	0.118	1.882	2.704	0.205	5.203	0.076	1.924
8	1.061	1.175	0.373	0.9027	0.167	1.638	0.185	1.815	2.847	0.387	5.307	0.136	1.864
9	1.000	1.094	0.337	0.9139	0.219	1.609	0.239	1.760	2.970	0.546	5.394	0.184	1.816
10	0.949	1.028	0.308	0.9227	0.262	1.584	0.284	1.716	3.078	0.687	5.469	0.223	1.777
11	0.905	0.973	0.285	0.9300	0.299	1.561	0.321	1.679	3.173	0.812	5.534	0.256	1.744
12	0.866	0.925	0.266	0.9359	0.331	1.541	0.354	1.646	3.258	0.924	5.592	0.284	1.716
13	0.832	0.884	0.249	0.9410	0.359	1.523	0.382	1.618	3.336	1.026	5.646	0.308	1.692
14	0.802	0.848	0.235	0.9453	0.384	1.507	0.406	1.594	3.407	1.121	5.693	0.329	1.671
15	0.775	0.816	0.223	0.9490	0.406	1.492	0.428	1.572	3.472	1.207	5.737	0.348	1.652
16	0.750	0.788	0.212	0.9523	0.427	1.478	0.448	1.552	3.532	1.285	5.779	0.364	1.636
17	0.728	0.762	0.203	0.9551	0.445	1.465	0.466	1534	3.588	1.359	5.817	0.379	1.621
18	0.707	0.738	0.194	0.9576	0.461	1.454	0.482	1.518	3.640	1.426	5.854	0.392	1.608
19	0.688	0.717	0.184	0.9599	0.477	1.443	0.497	1.503	3.689	1.490	5.888	0.404	1.596
20	0.671	0.697	0.110	0.9619	0.491	1.433	0.510	1.490	3.735	1.544	5.922	0.418	1.586

****

INDIAN INSTITUTE OF HANDLOOM TECHNOLOGY

BARGARH/GUWAHATI/FULIA/JODHPUR/SALEM/VARANASI/CHAMPA/KANNUR/KHTI-GADAG/SPKM-IIH-VENKATAGIRI

Diploma in Handloom &Textile Technology

SEMESTER EXAMINATION-Nov/Dec-2021

(Regulation-2014/Regulation-2021)

Year / Semester: FIFTH SEMESTER

Time: 90 minute

Subject Code & Name: 5.2 FABRIC STRUCTURE-IV

Max.Marks:40

PART-A
(4×2=8 marks)

Answer any four questions. The answer shall be within 2 or 3 sentences:-

1. How many beams are required for extra warp weaving?
2. Name the series of ends and picks used in patent satin weaving.
3. Draw the diagram of one block of 8 x 5 count graph.
4. How three different colour effects are produced in double cloth.
5. What are the types of shed formed in leno weaving?

PART-B
4 X 8 = 32 marks

Answer any four questions from Q.No 6 to 10 in detail. Either A or B has to be answered in each question.

6. A. Taking a motif on 12 x 12, mark a full structure of extra weft design with 1:1 ratio of ground and extra picks. (8)

(OR)

B. Taking a spot design on 8 x 8, indicate the extra warp graph design on 16 x 8 with 1 ground Warp thread: 1 extra warp thread ratio (Ground weave is plain). (8)

7. A. Explain reversible and non-reversible weft tapestry with suitable weave and thread interlacing Diagram. (8)

(OR)

B. Taking a motif on 6 x 6, mark the full structure of patent satin. (8)

8. A. Take a small motif and enlarge it on 20 x 20 with suitable binding marks to produce figured single cloth. (8)

(OR)

B. Taking a guide graph in 24 x 24, develop a warp backed structure on 48 x 24. (8)

9. A. By taking a small motif, construct a full structure of a two colour double cloth on 48 x 48. (8)

(OR)

B. Indicate the complete structure of 4 colour figured double cloth on 32 x 32. (8)

10. A. Draw the formation of crossed shed and open shed in leno weaving. (8)

(OR)

B. Draw thread interlacing diagram and drafting order to produce a leno weave with pointed draft. (8)

****

INDIAN INSTITUTE OF HANDLOOM TECHNOLOGY

BARGARH/GUWAHATI/FULIA/JODHPUR/SALEM/VARANASI/CHAMPA/KANNUR/KHTI-GADAG/SPKM-IIH-VENKATAGIRI

Diploma in Handloom & Textile Technology
SEMESTER EXAMINATION- Nov/Dec-2021
(Regulation-2021)

Year/Semester: Ist Semester

Subject code & Name: BS105: Applied Chemistry

Time: 90 Minutes

Max. Marks: 40

PART-A

(4×2=8 marks)

Answer any four questions. The answer shall be within 2 or 3 sentences:-

1) Write the value of n, l and m for 3p orbital. (2)
2) What are the causes of poor lathering in soap in hard water? (2)
3) Expand the term PVC and PTFE. Write their structures. (2)
4) What is calorific value of fuel? What is its unit? (2)
5) What is Corrosion? What it is called in case of iron? (2)

PART-B

(4 X 8 = 32 marks)

Answer any four questions from Q.No 6 to 10 in detail. Either A or B has to be answered in each question.

6) **A.** Explain Rutherford model of atom .What are the conclusions and drawbacks of Rutherford model. (8)

OR

B) Explain the types of Quantum numbers and their significance .What designation is given to an orbital having n=5 and l=3. (8)

7) **A.** Explain the process of softening of water using Zeolite process with neat diagram? (8)

OR

B. Explain the soda lime process used in water softening .Differentiate between Hot and Cold lime soda process. (8)

8) **A.** What are plastics? Differentiate between molecular structure and behavior of Thermoplastic and Thermosetting plastic with examples. (8)

OR

B. Give a brief account of general principles of metallurgy. How aluminium is extracted from bauxite? (8)

9) **A.** What are the functions of lubricants? Explain the physical properties of Lubricants. (8)

OR

B. What are the Characteristics of good lubricants? What is the difference between Hydrodynamic and Boundary lubrication? (8)

10) **A.** Explain the types of corrosion. What are the factors affecting corrosion? (8)

OR

B. Differentiate between primary cell and secondary cell. Explain in brief about lead storage battery. (8)

******