SRM VALLIAMMAI ENGINEERING COLLEGE

(AN AUTONOMOUS INSTITUTION)

SRM Nagar, Kattankulathur – 603 203

DEPARTMENT OF CIVIL ENGINEERING

QUESTION BANK

II SEMESTER

1914209 SAFETY IN TEXTILE INDUSTRY

(M.E. INDUSTRIAL SAFETY ENGINEERING)

Regulation – 2019

Academic Year 2019-2020

Prepared by

Ms.T.SWEDHA

ASSISTANT PROFESSOR/ CIVIL

SRM VALLIAMMAI ENGINEERING COLLEGE
(AN AUTONOMOUS INSTITUTION)

SRM Nagar, Kattankulathur – 603 203

DEPARTMENT OF CIVIL ENGINEERING

QUESTION BANK
(As per Regulation 2019)

SUBJECT CODE/NAME: 1914209- SAFETY IN TEXTILE INDUSTRY

SEM/YEAR: II/I

UNIT I - INTRODUCTION			
Introduction to process flow charts of i) short staple spinning, ii) long staple spinning, iii) viscose rayon and synthetic fibre, manufacturer, iv) spun and filament yarn to fabric manufacture, v) jute pinning and jute fabric manufacture-accident hazard, guarding of machinery and safety precautions in opening, carding, combing, drawing, flyer frames and ring frames, doubles, rotor spinning, winding, warping, softening/spinning specific to jute.			
PART A			
Q.NO	**QUESTIONS**	**BT LEVEL**	**COMPETENCE**
1.	What is Hazard?	BT 1	Remembering
2.	Define Rayon	BT 1	Remembering
3.	Recall carding operation.	BT 1	Remembering
4.	What do you mean by softening with specific to jute fabric?	BT 1	Remembering
5.	List out the basic operations in a blow room	BT 1	Remembering
6.	What are the safety precautions to be taken while working with carding machines?	BT 1	Remembering
7.	Why guarding is required?	BT-2	Understanding
8.	Compare short staple and long staple spinning.	BT-2	Understanding
9.	Illustrate drawing	BT-2	Understanding
10.	Summarize the operations involved in blowing frame.	BT-2	Understanding
11.	Develop in detail about long staple spinning.	BT-3	Applying
12.	Identify synthetic fibre	BT-3	Applying
13.	Develop the flow diagram of a blow room	BT-3	Applying
14.	List some reasons for causes of accidents while working with machinery	BT-4	Analyzing

15.	Examine the commonly used machine guards.	BT-4	Analyzing
16.	Classify the types of yarn	BT-4	Analyzing
17.	Determine the hazards associated with conventional ring frames.	BT-5	Evaluating
18.	Assess the parts in a blow room that cause severe accidents.	BT-5	Evaluating
19.	Formulate the advantages in using high precision flyers.	BT-6	Creating
20.	Propose how can the hazards in conventional ring frames be eliminated.	BT-6	Creating
PART B			
1.	Tell about the staple spinning process and the machineries used in this.	BT-1	Remembering
2.	What are the fire hazards in a jute mill	BT-1	Remembering
3.	i) Elaborate on spin and filament yarn to fabric manufacture with a process flow chart. ii) Explain in detail about the safety precautions to be taken while working with flyer frames and ring frames.	BT-1	Remembering
4.	i) Tell in detail about the safety precautions to be taken while working with combing and drawing machines. ii) Recall the spinning process sequence with process flowchart.	BT-1	Remembering
5.	Explain staple spinning both long and short, with the aid of flowcharts.	BT-2	Understanding
6.	Summarize the safety precautions in the various operations in a textile industry.	BT-2	Understanding
7.	Explain about jute, its manufacturing and finishing process flow charts.	BT-2	Understanding
8.	Develop in details about the safety precautions to be considered during doubles& rotor spinning.	BT-3	Applying
9.	Organize the sequence of machines in a blow room process. Explain.	BT-3	Applying
10.	Model the flow chart of synthetic fibre manufacture and explain.	BT-3	Applying
11.	Evaluate the machine related hazards in a textile industry.	BT-4	Analyzing
12.	Estimate the fire hazards in textile industry.	BT-4	Analyzing
13.	Elaborate the hazards in winding operation	BT-5	Evaluating
14.	Formulate the safety precautions to be followed in spinning	BT-6	Creating
PART C			
1.	Determine the process involved in jute mills.	BT-5	Evaluating
2.	Explain in detail the manufacture of filament yarn.	BT-2	Understanding
3.	Model a flow chart for the process involved in spinning mill.	BT-3	Applying

4.	Recall and explain opening process.	BT-2	Understanding

UNIT II- TEXTILEHAZARDS I

Accident hazards i)sizing processes- cooking vessels, transports of size, hazards due to steam ii) Loom shed – shuttle looms and shuttless looms iii) knitting machines iv) non-wovens..

Q.NO	QUESTIONS	BT LEVEL	COMPETENCE
1.	Tell about loom	BT 1	Remembering
2.	Define accident.	BT 1	Remembering
3.	Write short notes on cooking vessels	BT 1	Remembering
4.	What are the hazards due to stem?	BT 1	Remembering
5.	What are loom sheds.	BT 1	Remembering
6.	List out the causes for accident.	BT 1	Remembering
7.	Illustrate 'sizing' in textile industry.	BT-2	Understanding
8.	Explain the sequence of operation in weaving.	BT-2	Understanding
9.	Summarize the objective of sizing.	BT-2	Understanding
10.	Demonstrate the components of loom	BT-2	Understanding
11.	Identify the machine parts of sizing	BT-3	Applying
12.	What do you understand by shedding.	BT-3	Applying
13.	Choose the factors affecting size take up percentage	BT-3	Applying
14.	List out the types of shuttle less loom	BT-4	Analyzing
15.	Categorize the types of knitting machines	BT-4	Analyzing
16.	List out the fibres used in manufacturing non woven fibres.	BT-4	Analyzing
17.	Criticize about the effect of sizing in yarn	BT-5	Evaluating
18.	Explain what is a knitting machine	BT-5	Evaluating
19.	Estimate the dangers while handling looms.	BT-6	Creating
20.	Formulate the faults in sizing	BT-6	Creating
	PART B		
1.	What are the hazards in textile processes.	BT-1	Remembering
2.	As a supervisor what are the precautions you take to control the hazards and risks in textile industries?	BT-1	Remembering
3.	List the accident hazards involved in the sizing processes.	BT-1	Remembering
4.	Define Sizing , its Objects ,Types and Disadvantages	BT-1	Remembering
5.	i) List and explain in detail about the shuttle and shuttle looms. ii) Illustrate the hazards related to sizing process? Explain in detail.	BT-2	Understanding
6.	Demonstrate about	BT-2	Understanding

	1)Knitting Machines 2) Non – woven		
7.	Explain the sizing procedure.	BT-2	Understanding
8.	As a supervisor identify the precautions you take to ensure the occupational health and safety in looms?	BT-3	Applying
9.	Recall the accident hazards in loom sheds.	BT-3	Applying
10.	Construct the sizing defects and the remedial measures for defect prevention.	BT-3	Applying
11.	Categorize the process involved in looms	BT-4	Analyzing
12.	Examine the safety aspects to be considered in sizing.	BT-4	Analyzing
13.	Evaluate the advantages and disadvantages of shuttle less looms	BT-5	Evaluating
14.	Propose what should a non- woven felting machine have?	BT-6	Creating
PART C			
1.	Identify the operations involved in sizing machines.	BT-3	Applying
2.	What should a flat knitting and circular knitting machine have?	BT-1	Remembering
3.	Illustrate - Risks in weaving and knitting	BT-2	Understanding
4.	Examine and explain the sizing ingredients	BT-4	Analyzing

UNIT III- TEXTILE HAZARDS II			
Scouring, bleaching, dyeing, punting, mechanical finishing operations and effluents in textile processes.			
PART A			
Q.NO	**QUESTIONS**	**BT LEVEL**	**COMPETENCE**
1.	Why bleaching is required?	BT 1	Remembering
2.	What do you mean by ‘Effluent’?	BT 1	Remembering
3.	Recall scouring	BT 1	Remembering
4.	Name the effluents of textile industry?	BT 1	Remembering
5.	Tell the effluents used in textile industries.	BT 1	Remembering
6.	Define bleaching process	BT 1	Remembering
7.	Compare bleaching and dying.	BT-2	Understanding
8.	Summarize the objectives of scouring.	BT-2	Understanding
9.	Explain about oxidative bleaching.	BT-2	Understanding
10.	Demonstrate textile finishing.	BT-2	Understanding

11.	Develop the two methods of scouring	BT-3	Applying
12.	Identify which bleaching is more hazardous.	BT-3	Applying
13.	Organize the major pollutants in textile waste water.	BT-3	Applying
14.	Categorize any two precautions to be taken in batch scouring	BT-4	Analyzing
15.	Examine reductive bleaching	BT-4	Analyzing
16.	Analyze about bio polishing.	BT-4	Analyzing
17.	Determine the classification of pollutants in textile effluent.	BT-5	Evaluating
18.	Estimate the effects of hazardous substance in dyeing.	BT-5	Evaluating
19.	Formulate any two facts of sensitisation	BT-6	Creating
20.	Elaborate symptoms of respiratory sensitisation.	BT-6	Creating
PART B			
1.	List out the impact of cotton inhaling on textile mill workers.	BT-1	Remembering
2.	What are the hazards prevention in blow room and ring frame area.	BT-1	Remembering
3.	Tell in detail about the following 1) Scouring 2) Dyeing	BT-1	Remembering
4.	i) Explain in detail about Mechanical Finishing Operations. ii) Evaluate the safety precautions to be taken while working in bleaching and punting process.	BT-1	Remembering
5.	Summarize the hazards involved in dyeing operations.	BT-2	Understanding
6.	Explain in detail the hazard involved in mechanical finishing operations.	BT-2	Understanding
7.	Illustrate the reasons for chemical pollution in different stages of textile processes.	BT-2	Understanding
8.	Identify the hazard involved in scouring and bleaching process.	BT-3	Applying
9.	Organize the treatment involved in treating textile effluents.	BT-3	Applying
10.	Explain about mechanical finishing	BT-3	Applying
11.	Examine the steps involved in assessing and managing the risks of hazardous chemicals to health.	BT-4	Analyzing
12.	Classify finishing based on degree of permanence.	BT-4	Analyzing
13.	Explain about batch scouring and continuous scouring.	BT-5	Evaluating
14.	Compile what harmful chemical a strain remover in textile industry contains.	BT-6	Creating
PART C			
1.	Explain about chemical finishing.	BT-2	Understanding
2.	Elaborate the symbols, abbreviation and description of hazards used in textile industry.	BT-6	Creating

3.	Model a flowchart representing the stages in textile processing.	BT-3	Applying
4.	Determine the various types of treatment process followed to treat waste water.	BT-5	Evaluating

UNIT IV- HEALTHAND WELFARE

Health hazards in textile industry related to dust, fly and noise generated-control measures-relevant occupational diseases, personal protective equipment-health and welfare measures specific to textile industry, Special precautions for specific hazardous work environments.

PART – A

Q.NO	QUESTIONS	BT LEVEL	COMPETENCE
1.	List out the factors affecting the workers' health in textile industry.	BT 1	Remembering
2.	Recall any four occupational diseases in textile industry.	BT 1	Remembering
3.	What are the specific precautions to be considered for specific hazardous environment?	BT 1	Remembering
4.	Name the PPEs used in textile industry.	BT 1	Remembering
5.	Show the various causes for hazards in textile industry.	BT 1	Remembering
6.	Define PPE with examples.	BT 1	Remembering
7.	Outline some remedial measure for noise hazard.	BT-2	Understanding
8.	Classify the types of hazards	BT-2	Understanding
9.	Summarize the most common disease name found in ginning industry.	BT-2	Understanding
10.	Illustrate for what particle size of dust is the deposition in lungs maximum?	BT-2	Understanding
11.	Construct the mechanical hazards in textile industry.	BT-3	Applying
12.	Identify the remedial measures to be practiced to overcome dust hazard	BT-3	Applying
13.	Organize some ways to control noise pollution.	BT-3	Applying
14.	Examine fire hazard in cotton spinning.	BT-4	Analyzing
15.	Discover the environmental problems created because of dust.	BT-4	Analyzing
16.	List down the types of employee welfare services.	BT-4	Analyzing
17.	Interpret the various aspects of industrial health services.	BT-5	Evaluating
18.	Criticize the works a employee welfare officer do?	BT-5	Evaluating
19.	Formulate mechanical hazards in textile industry.	BT-6	Creating
20.	Propose the types of process used for treatment and recycle of effluent from textile industry.	BT-6	Creating

PART – B			
1.	Name the noise hazards and its remedies in textile industries	BT-1	Remembering
2.	What are the health and welfare measures specific to textile industries and how to motivate the employees to ensure the same?	BT-1	Remembering
3.	Tell the impact of cotton inhaling on textile mill workers.	BT-1	Remembering
4.	Write in detail about the health and welfare measures specific to textile industry and how to motivate the employees to ensure the same?	BT-1	Remembering
5.	Discuss in brief the health and welfare measures in textile industry.	BT-2	Understanding
6.	Explain the health hazard in a textile industry.	BT-2	Understanding
7.	Briefly explain health hazards associated with dust in textile industries.	BT-2	Understanding
8.	Explain the different types of hazards and their remedial measures.	BT-3	Applying
9.	Components of safety service – briefly explain	BT-3	Applying
10.	Identify the occupational disease in cotton spinning.	BT-3	Applying
11.	Analyze the safety and welfare measures for employees in textile industry	BT-4	Analyzing
12.	Categorize the factors to be checked for the health of employees?	BT-4	Analyzing
13.	Criticize on health hazard in Production, ginning and yarn manufacturing unit	BT-5	Evaluating
14.	Formulate a brief description about health hazards in weaving, dyeing, printing and finishing unit	BT-6	Creating
PART C			
1.	Compile the problems created due to dust.	BT 6	Creating
2.	Outline the labor welfare facilities.	BT 2	Understanding
3.	Organize the actions that the employers should follow for reducing pollution hazards in textile industry?	BT 3	Applying
4.	Analyze the statutory welfare schemes for employees.	BT 4	Analyzing

UNIT V- SAFETYSTATUS
Relevant provision of factories act and rules and other statues applicable to textile industry –effluent treatment and waste disposal in textile industry

PART – A			
Q.NO	**QUESTIONS**	**BT LEVEL**	**COMPETENCE**
1.	Define Safety.	BT 1	Remembering
2.	Who is an occupier?	BT 1	Remembering
3.	What are the legal acts and rules applicable to textile industry?	BT 1	Remembering
4.	How are wastes disposed in textile industry?	BT 1	Remembering
5.	What are the waste disposable methods used in textile industry?	BT 1	Remembering
6.	Define Act.	BT 1	Remembering
7.	Summarize why effluent treatment is essential in textile industries?	BT-2	Understanding
8.	Illustrate what does a competent person mean according to a act	BT-2	Understanding
9.	Demonstrate what hazardous process mean according 1948ACT.	BT-2	Understanding
10.	Outline the sections which deal with health provision of factory workers	BT-2	Understanding
11.	Identify the compounds available in waste water coming out from dyeing process	BT-3	Applying
12.	Develop in detail about hazardous process.	BT-3	Applying
13.	Organize the factors that decide the nature of waste generated.	BT-3	Applying
14.	Examine general waste categorization.	BT-4	Analyzing
15.	Examine acute toxicity.	BT-4	Analyzing
16.	Compare act and rules.	BT-4	Analyzing
17.	Define chronic toxicity	BT-5	Evaluating
18.	Categorize the levels of treatment in effluent treatment plant.	BT-5	Evaluating
19.	Compile the types of genotoxicity.	BT-6	Creating
20.	Formulate the major use of water in textile industry.	BT-6	Creating
PART – B			
1.	What are the various textile wastes and it managements.	BT-1	Remembering
2.	Write down the effluent treatment process sequence in textile sectors.	BT-1	Remembering
3.	List the various rules applicable to textile industry.	BT-1	Remembering
4.	Discuss effluent treatment and waste disposal in a textile industry.	BT-1	Remembering
5.	i) Summarize the relevant provisions of factories act and rules applicable to textile industry. ii) Write in detail about the waste disposal in textile industry.	BT-2	Understanding
6.	i) Briefly explain about the effluent treatment in textile industry. ii) Classify the special precautions for specific hazardous work	BT-2	Understanding

	environment in textile industry.		
7.	Illustrate the factories act and rules and other status applicable to textile industries.	BT-2	Understanding
8.	Develop and explain briefly the effluent treatment in textile industry.	BT-3	Applying
9.	Organize about manufacturing process as per 1948ACT	BT-3	Applying
10.	Identify the areas covered under the safety provisions from sec 21 to 41 of 1948 ACT	BT-3	Applying
11.	Analyze the rules to be followed regarding dust and fume, lighting and overcrowding?	BT-4	Analyzing
12.	Examine about genotoxicity.	BT-4	Analyzing
13.	Evaluate the chemicals that should not be present in waste water.	BT-5	Evaluating
14.	Elaborate in detail about the operations carried out in the primary treatment process of waste water.	BT-6	Creating
PART – C			
1.	Write about the sections that deal with the welfare provision for factory workers.	BT 1	Remembering
2.	Develop the procedure of secondary treatment process of waste water treatment.	BT 3	Applying
3.	Summarize the potential releases emitted during textiles manufacturing.	BT 2	Understanding
4.	Formulate the sequence of process in effluent treatment plant of textile industry.	BT 6	Creating