

KHULNA UNIVERSITY OF ENGINEERING & TECHNOLOGY

Department of Textile Engineering

B. Sc. Engineering 3rd Year Backlog Examination, 2018

Hum-3121

(Accounting and Industrial Law)

Time: 3 Hours

Total Marks: 210

N.B.: i) Answer any THREE questions from each section in separate scripts.

ii) Figures in the right margin indicate full marks.

iii) Assume reasonable data if missing any.

SECTION-A

- 1(a) Define accounting. State the importance of accounting. 15
- 1(b) Who are the users of accounting information? Discuss. 10
- 1(c) Describe the double entry system of accounting. 10
- 2(a) What is journal? What are the objectives of preparing journal? 15
- 2(b) Data for Nowshin Alom, an interior decorator, in her first month of business are as follows: 20

January 2	Invested Tk. 15,000 cash in business.
January 3	Purchased equipment for Tk. 4,000 cash for use in business.
January 9	Purchased supplies on account for Tk. 500.
January 11	Billed customers Tk. 1,800 for services performed.
January 16	Paid Tk. 200 cash for advertising.
January 20	Received Tk. 700 cash from customer billed on January 11.
January 23	Payment to Accounts Payable on 9 th January Tk. 500.
January 28	Withdrew Tk. 2,000 cash for personal use of owner.

Journalize the transactions.

- 3(a) Define adjusting entries. Discuss the importance of adjusting entries. 10
- 3(b) Define trial balance. What are the errors not detected by a trial balance? 10
- 3(c) From the following ledger balances, prepare a trial balance as on 31st December, 2018: 15

Cash-----	Tk. 10,000	Supplies-----	Tk. 1,900
Prepaid insurance-----	Tk. 2,400	Land-----	Tk. 15,000
Lodge-----	Tk. 60,000	Furniture-----	Tk. 16,800
Accounts payable-----	Tk. 5,300	Unearned rent-----	Tk. 3,600
Mortgage payable-----	Tk. 35,000	Capital-----	Tk. 60,000
Rent revenue-----	Tk. 19,200	Advertisement expense----	Tk. 10,500
Salaries expense-----	Tk. 3,000	Utilities expense-----	Tk. 3,500

- 4 The following is the trial balance of Rahim Enterprise for the quarter ended 35
March 31, 2018:

RAHIM ENTERPRISE
TRIAL BALANCE, MARCH 31, 2018

Account Titles	Debit (Tk.)	Credit (Tk.)
Cash	1,10,000	
Accounts Receivable	60,200	
Supplies	10,500	
Prepaid Insurance	24,000	
Equipment	3,00,000	
Notes Payable		90,000
Accounts Payable		1,33,500
Rahim, Capital		2,00,000
Service Revenue		1,36,200
Rahim, Drawing	6,000	
Salaries Expense	20,000	
Travel Expense	15,000	
Rent Expense	12,000	
Miscellaneous Expense	2,000	
	5,59,700	5,59,700

Additional Information: a) Supplies on hand Tk. 7,500. b) Depreciation on equipment Tk. 5,000 per quarter. c) Insurance expires @ Tk. 2,000 per month.

Required:

- (i) Prepare a statement of comprehensive income,
- (ii) Prepare a statement of owner's equity, and
- (iii) Prepare a statement of Financial Position/-Balance Sheet for the quarter ended March 31, 2018.

SECTION-B

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|------|---|----|
| 5(a) | What is industrial law? | 05 |
| 5(b) | Who is an inspector? State the power of an inspector. | 18 |
| 5(c) | Write down five provisions regarding health hygiene in a factory. | 12 |
| | | |
| 6(a) | What is conservation of environment? | 05 |
| 6(b) | What are the deductions may be made from wages? | 20 |
| 6(c) | Specify the remedial measures for injury to ecosystems. | 10 |
| | | |
| 7(a) | What is meant by industrial dispute? | 05 |
| 7(b) | What are the differences between strike and lock-out? | 10 |
| 7(c) | Discuss the provision of arbitration as per "EPZ Workers' Welfare Association and Industrial Relations Act 2010". | 20 |
| | | |
| 8(a) | Define wages. | 10 |
| 8(b) | Write down the power and functions of the Director General. | 25 |

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KHULNA UNIVERSITY OF ENGINEERING & TECHNOLOGY

Department of Textile Engineering

B. Sc. Engineering 3rd Year Backlog Examination, 2018

TE-3101

(Yarn Manufacturing Engineering-II)

Time: 3 Hours

Total Marks: 210

N.B.: i) Answer any THREE questions from each section in separate scripts.

ii) Figures in the right margin indicate full marks.

iii) Assume reasonable data if missing any.

SECTION-A

- 1(a) State the effects of combing on yarn quality. 08
- 1(b) Why lap preparation is necessary before combing? 10
- 1(c) Define degree of combing. Mention the types of combing. 10
- 1(d) If for combing machine, Feed/nip = 0.25 inch; Nip/minute = 280; No. of head = 8; Noil = 15 %; Efficiency = 85 %. Then find out the production/shift when i) Feed lap weight = 850 grain/yd, and ii) Feed lap hank = 0.0095. 07
- 2(a) What are the reasons of getting long fibers in the noil of a comber? 10
- 2(b) Show the differences between forward feed and backward feed. 10
- 2(c) State the faults of a comber with their remedies. 10
- 2(d) Find out the number of comber machine to produce 10000 kg/day of 40 Ne semi combed yarns where noil% = 15, Efficiency = 90% and assume all necessary data. 05
- 3(a) Mention the functions of a flyer. 05
- 3(b) Describe the winding principle of a speed frame. 10
- 3(c) Find out the production/frame/shift of a modern speed frame at 85% efficiency to produce roving. (Assume necessary parameters) 05
- 3(d) Discuss the faults of a speed frame. State the factors considered for selection of twist in roving. 15
- 4(a) Why ring frame is called the king of spinning? 05
- 4(b) Show the relationship between traveller speed and spindle speed. 10
- 4(c) Describe the different parts of a traveller. 10
- 4(d) State the waste % of ring frame. 10

SECTION-B

- 5(a) Describe the functions of ring frame. 15
- 5(b) Write short notes on: i) Break draft, ii) Lappets, and iii) Yarn faults. 15
- 5(c) A ring frame has following specifications:
Spindle speed = 15000 rpm; TPI = 20; Yarn Count = 30^S (Hosiery); No. of spindle/frame = 480; Waste = 2 %; Efficiency = 90%. 05
Find out the production/shift/frame in kg.
- 6(a) Write the objects of jute draw frame with its functions. 15
- 6(b) Describe the working principle of Push-bar draw frame. 15
- 6(c) Calculate the sliver wt./100 yds of 2nd Draw-sliver from 14 lb/100 yds of 1st Draw-jute sliver where draft = 4 and doubling = 2:1. 05
- 7(a) Describe a crimping box with a neat sketch. 10
- 7(b) Define reach and nip. What are the conditions of fixing reach in a jute drawing frame? 08
- 7(c) Point out the basic improvements of 'GARDELLA 18-M' draw frame. 07
- 7(d) Differentiate between Push bar draw frame and spiral draw frame. 10
- 8(a) Describe a bobbin building mechanism of a jute spinning machine. 10
- 8(b) Describe a slip draft jute spinning machine with necessary diagram. 10
- 8(c) Write the features of spinguard sliver spinning frame. 10
- 8(d) Find out the production/day of a jute sliver spinning frame when- 05
Flyer speed = 4000 rpm; K-factor = 12; Jute yarn count = 10 lb/spyndle;
Efficiency = 80 %.
Assume other necessary parameters.

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KHULNA UNIVERSITY OF ENGINEERING & TECHNOLOGY

Department of Textile Engineering

B. Sc. Engineering 3rd Year Backlog Examination, 2018

TE-3107

(Apparel Manufacturing Engineering-I)

Time: 3 Hours

Total Marks: 210

N.B.: i) Answer any THREE questions from each section in separate scripts.

ii) Figures in the right margin indicate full marks.

iii) Assume reasonable data if missing any.

SECTION-A

- 1(a) Define the following terms: 10
i) Grain Line, ii) GSP, iii) FOB, iv) PI, and v) Swatch
- 1(b) Write down the flowchart of garment manufacturing process. 15
- 1(c) Show the cycle of an export letter of credit. 10
- 2(a) What are the main differences among basic block, working pattern, and production pattern? 06
- 2(b) Write down the functions of the following devices: 10
i) Plotter, and ii) Pantograph.
- 2(c) Define marker efficiency. Explain the factors affecting marker efficiency. 14
- 2(d) Why pattern grading is important for apparel production? 05
- 3(a) Describe the operating principle and necessity of a band knife cutting machine with suitable diagram. 15
- 3(b) How shape and movement of the cutting device create accuracy problem in manual cutting? Explain with diagram. 10
- 3(c) Why numbering is essential after cutting? 05
- 3(d) What are the remedies of fused edge during fabric cutting? 05
- 4(a) Explain- "Fabric wastages can be reduced by efficient marker making". 05
- 4(b) Sketch and label a straight knife cutting machine. 10
- 4(c) Discuss the working principle of a water jet cutting machine with neat sketch. 15
- 4(d) Define group marker. 05

SECTION-B

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|------|--|----|
| 5(a) | Briefly describe different types of samples used in garment sector. | 13 |
| 5(b) | State the general principles of pattern alternation. | 12 |
| 5(c) | How a sizing system is developed? | 10 |
| | | |
| 6(a) | Draw a detailed flow chart of fabric spreading and cutting section. | 10 |
| 6(b) | Discuss 'Face up in a single direction' and 'zig-zag' modes of fabric spreading with necessary diagrams. | 15 |
| 6(c) | Write down the features of automatic spreading process. | 10 |
| | | |
| 7(a) | What is fabric splicing? Describe different types of fabric splicing. | 13 |
| 7(b) | Narrate different types of losses in fabric spreading. | 14 |
| 7(c) | Demonstrate the techniques involved in controlling quality in fabric spreading. | 08 |
| | | |
| 8(a) | Define and classify interlining with brief discussion. | 10 |
| 8(b) | Describe the working principle of a continuous fusing press with appropriate diagram. | 15 |
| 8(c) | Differentiate between 'strike through' and 'strike back' in fusing with neat sketch. | 10 |

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KHULNA UNIVERSITY OF ENGINEERING & TECHNOLOGY

Department of Textile Engineering

B. Sc. Engineering 3rd Year Backlog Examination, 2018

TE-3105

(Wet processing Engineering-I)

Time: 3 Hours

Total Marks: 210

- N.B.:** i) Answer any THREE questions from each section in separate scripts.
ii) Figures in the right margin indicate full marks.
iii) Assume reasonable data if missing any.

SECTION-A

- 1(a) What is hardness of water? 03
- 1(b) Write down the standard quality of dye house water. 05
- 1(c) Discuss the problems caused by hard water in textile industry. 12
- 1(d) What is water softening? Describe the demineralization process of water softening. 15
- 2(a) Define surfactant. Classify surfactants. 09
- 2(b) Which one is more effective between soap and detergent for removing the dirt from substrate? Explain with figure. 08
- 2(c) How micelle is formed during the cleaning action of soap? 10
- 2(d) Write short notes on the followings: 08
- i) Cluster formation
- ii) Interfacial tension
- 3(a) What is gas singeing machine? Write down the important parameters of gas singeing machine that should be considered before running the machine. 10
- 3(b) Write down the common problems in gas singeing machine and their causes. 07
- 3(c) What is mercerization? Why high concentrated NaOH is used in mercerization? 06
- 3(d) What is meant by Barium Activity Number (BAN)? How can you estimate the mercerization effect by Barium Activity Number (BAN)? 12
- 4(a) Write down the mechanism of H₂O₂ bleaching. 10
- 4(b) Distinguish between hydrogen peroxide and sodium hypochlorite bleaching. 08
- 4(c) Why hydrogen peroxide is called universal bleaching agent? 07
- 4(d) What is desizing? Describe the enzymatic desizing process. 10

SECTION-B

- 5(a) Write down the successive stages of dyeing with figure. 12
- 5(b) Write down the flow chart of denim dyeing procedure. 07
- 5(c) Describe the working principle of jet dyeing machine. 10
- 5(d) Calculate the reel speed of a dyeing machine from the following particulars: 06
- Fabric GSM = 200
- Fabric Dia. = 60 inch
- Batch weight = 300 Kg.
- Dyeing cycle time = 3 min.
- 6(a) What is upper milling acid dyes? Write down the theory of dyeing of acid dye. 10
- 6(b) "Direct dyes have strong affinity towards fibers"- Which factors are responsible for this dye diffusion into the fiber? 10
- 6(c) Why-acid is needed in acid dyeing process? 05
- 6(d) Write short notes on: 10
- i) Exhaustion, ii) Fixation, iii) Sorption, and iv) Adsorption
- 7(a) Write down the classification of vat dyes according to chemical structure. 08
- 7(b) Describe the mechanism of vat dyeing. 10
- 7(c) State the properties of basic dye. 05
- 7(d) Describe the dyeing method of cotton fabric with basic dyes including recipe and curve. 12
- 8(a) What is mesh count? What are the relationships between mesh count and ink deposition on printed fabric for different printing quality? 05
- 8(b) What is burnout printing? Describe the procedure of burnout printing. 10
- 8(c) Describe the procedure of transfer printing with necessary sketch. 10
- 8(d) What is photo emulsion? Which photo emulsion between di-azo and pure photo polymer is more convenient to us and why? Explain. 10

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KHULNA UNIVERSITY OF ENGINEERING & TECHNOLOGY

Department of Textile Engineering

B. Sc. Engineering 3rd Year Backlog Examination, 2018

TE-3231

(Merchandising and Marketing)

Time: 3 Hours

Total Marks: 210

N.B.: i) Answer any THREE questions from each section in separate scripts.

ii) Figures in the right margin indicate full marks.

iii) Assume reasonable data if missing any.

SECTION-A

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|------|--|----|
| 1(a) | What is Branding? Describe the elements of branding. | 10 |
| 1(b) | State the key points in understanding the marketplace and customer needs. | 12 |
| 1(c) | Depict PLC with its distinguished strategies for sales growth, profit, price, and competitors. | 08 |
| 1(d) | What is meant by Marketing Plan? | 05 |
| 2(a) | What are the price-adjustment strategies? Distinguish between psychological pricing and reference pricing. | 14 |
| 2(b) | Define packaging, and labeling. | 07 |
| 2(c) | What are the factors to be considered while setting price? | 14 |
| 3(a) | What is promotional mix? Explain the factors in setting the promotion mix with supporting examples from textile industry. | 15 |
| 3(b) | Define MIS. Distinguish among the types of research. | 12 |
| 3(c) | Suppose you are a brand manager of Partex group, you have launched a new jacket item. Write a "SWOT" analysis on this newly arrived product. | 08 |
| 4(a) | Discuss the importance and benefits of Corporate Social Responsibility to the marketing of textile companies in Bangladesh. | 08 |
| 4(b) | Define market segmentation. Briefly discuss the criteria for market segmentation. | 13 |
| 4(c) | Explain the buying process of Institutional Customers. | 10 |
| 4(d) | State the types of buying decisions. | 04 |

SECTION-B

- 5(a) What is meant by merchandising? Briefly discuss the activities involved in woven merchandising. 12
- 5(b) Write short notes on: i) Fashion Calendar, ii) TNA, and iii) Errors of visual merchandising. 12
- 5(c) How to do visual merchandising? Mention its advantages for the buyer and seller today. 11
- 6(a) What is merchandising planning? Describe the methods of inventory planning in merchandising. 12
- 6(b) Define Range Development. Briefly discuss the steps in range development. 13
- 6(c) Describe the steps in Product Selection process. 10
- 7(a) What is Global Sourcing? How to source a better supplier? 12
- 7(b) Define product Assortment. Explain the key points of product assortment. 13
- 7(c) Establish and explain an apparel distribution channel from manufacturer to consumer. 10
- 8(a) Define sales forecasting. Discuss the benefits and limitations of sales forecasting. 12
- 8(b) What is non-store retailing? Briefly describe the different forms of non-store retailing. 13
- 8(c) Explain how production planning and control can help maintaining apparel shipment schedule. 10

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KHULNA UNIVERSITY OF ENGINEERING & TECHNOLOGY

Department of Textile Engineering

B. Sc. Engineering 1st Year Backlog Examination, 2018

Hum-1121

(Sociology and Economics)

Time: 3 Hours

Total Marks: 210

N.B.: i) Answer any THREE questions from each section in separate scripts.

ii) Figures in the right margin indicate full marks.

iii) Assume reasonable data if missing any.

SECTION-A

- 1(a) What is meant by sociology? Explain the impact of studying sociology at Textile Engineering department. 15
- 1(b) Is sociology a science? Give reason in favor of your opinion. 10
- 1(c) Explain contributing factors behind origin and development of sociology as a distinct science. 10
- 2(a) Discuss the relationship among the industrialization, urbanization, and urban ecology. 10
- 2(b) What is social structure? What are the basic elements of social structure of Bangladesh? 15
- 2(c) Explain the difference between society and community. 10
- 3(a) What is meant by society? Describe types and characteristics of distinctive types of society. 15
- 3(b) What is meant by socialization? Explain role of social communication media in socialization. 10
- 3(c) Describe relation between industrialization and urbanization with example from your own city. 10
- 4(a) What is meant by culture? Describe elements of culture with example. 15
- 4(b) Explain 'Cultural lag' in the light of Bangladeshi culture and society. 10
- 4(c) Explain causes and consequences of cultural relativism. 10

SECTION-B

- 5(a) Define law of demand. Why do the demand curves shift? Explain with example. 15
- 5(b) What is market equilibrium? Explain market equilibrium with the help of demand and supply curve. 20
- 6(a) What is meant by GNP deflation and transfer payment? 05
- 6(b) Explain main causes and consequences of inflation. 20
- 6(c) How does the Government control inflation with monetary measures? 10
- 7(a) What is production function? Explain the idea of factors of production. 15
- 7(b) What is meant by a 'competitive firm'? Under what condition will a firm shutdown temporarily? 20
- 8(a) Define price-elasticity of demand. Explain various types of elasticities of demand with figures. 20
- 8(b) Explain the behavior of total revenue on the basis of price-elasticity of demand. 15

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KHULNA UNIVERSITY OF ENGINEERING & TECHNOLOGY

Department of Textile Engineering

B. Sc. Engineering 3rd Year Backlog Examination, 2018

TE-3201

(Yarn Manufacturing Engineering-II)

Time: 3 Hours

Total Marks: 210

N.B.: i) Answer any THREE questions from each section in separate scripts.

ii) Figures in the right margin indicate full marks.

iii) Assume reasonable data if missing any.

SECTION-A

- 1(a) Describe the working principle of comber machine with diagram. 18
- 1(b) Mention the types of combing with noil %. 08
- 1(c) Define counter feed, and con-current feed of comber. 04
- 1(d) If Feed/nip = 7 mm and nip/minute = 280, feed lap.wt. = 1000 grain/yd, no. of head = 6, Noil % = 15, Efficiency = 88 %; Calculate the production/day of 8 combers. 05
- 2(a) Write down the functions of simplex. 05
- 2(b) Describe the SKF-PK-1500 drafting system. 20
- 2(c) Write short note on apron. 05
- 2(d) Find out the Production/shift/frame when; 05
Spindle speed = 1050 rpm, Roving wt. = 305 grain/30 yds, TM = 1.25, No. of spindles/frame = 120, and Efficiency = 85%.
- 3(a) State the factors considered for the selection of twist in roving. 10
- 3(b) What is inching motion? Differentiate between conventional and modern drafting system. 10
- 3(c) State the faults of a speed frame. Write short notes on: i) flyer, and ii) creel draft. 10
- 3(d) Write the functions of building motion. 05
- 4(a) Make a spin plan for average count 30^s Ne (Carded) yarn, where no. of spindles 25000 in a modern cotton spinning mill, from blowroom to ring frame. 30
- 4(b) Write down the limitations of ring frame. 05

SECTION-B

- 5(a) State the operations involved in Ring frame. 05
- 5(b) Establish the relation among Ring dia, Bobbin dia, and angle of pull. 10
- 5(c) What are the factors considered for the selection of ring diameter? 10
- 5(d) What is end breakage rate? State the technical causes of end breakage. 10
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- 6(a) Write down the objectives of jute drawing frame. Describe the working principle of push bar drawing frame with diagram. 20
- 6(b) Discuss the factors of fixing Reach. Describe a crimping box with a sketch. 15
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- 7(a) Mention the types of jute spinning frame with features. 10
- 7(b) Describe a bobbin building mechanism of jute spinning frame. 15
- 7(c) Define reach and nip. 05
- 7(d) Find out the production/day of a jute sliver spinning frame from the following data: 05
Flyer speed = (Assume), K-factor = 13, Jute yarn count = 5, No. of flyer/frame = 120, waste = 3%, Efficiency = 80%.
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- 8(a) What is felt bob? State its importance. 06
- 8(b) Write down the features of spinguard sliver spinning frame. 06
- 8(c) Describe a slip draft jute spinning machine with necessary diagram. 18
- 8(d) Estimate the sliver wt./100 yds of 2nd draw sliver from 16 lb/100 yds 1st draw jute sliver; here draft = 4 and doubling 3:1. 05

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