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VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD B.E. II Year (E.E.E.) I-Semester Supplementary Examinations, May/June-2017

Electrical Measurements and Instruments

Time: 3 hours

Max. Marks: 70

Note: Answer ALL questions in Part-A and any FIVE from Part-B

Part-A (10 X 2=20 Marks)

- 1. Compare analog and digital instruments.
- 2. What are the essential forces required in an electrical measuring instrument?
- 3. What is the function of braking system in an energy meter?
- 4. What are the conditions for synchronization of Alternators?
- 5. What are the merits of Kelvin's double bridge over a Wheat Stone Bridge?
- 6. List the various bridges used for measurement of unknown capacitance.
- 7. What is iron loss and how is it measured?
- 8. Draw the B-H curve and hysteresis loop with all specifications.
- 9. Draw the circuit diagram for calibration of voltmeter using potentio meter.
- 10. Why Secondary of CT should never be open circuited while the primary is energized?

Part-B $(5 \times 10 = 50 \text{ Marks})$ (All bits carry equal marks)

- 11. a) Derive torque expression for a dynamo meter type watt-meter.
 - b) How do you measure reactive power consumed in a 3-Ø circuit using single watt-meter.
- 12. a) Explain the construction and principle of operation of Maximum Demand indicator.
 - b) With neat diagram explain the construction and working of electrical resonance type frequency meter.
- 13. a) What is the function of Schering's bridge? Obtain the balance equation of the bridge.
 - b) Describe the principle of operation of Kelvin's double bridge with necessary diagram.
- 14. a) Describe the method of reversal for plotting B-H curve of a ring specimen.
 - b) How do you calibrate the Ballistic Galvanometer by Hibbert's magnetic standard?
- 15. a) Describe the working principle of polar type AC potentio meter.
 - b) Explain the method of calibrating wattmeter using a potentio meter.
- 16. a) How do you measure active power consumed in a 3-Ø balanced circuit using single wattmeter.
 - b) Explain principle of operation of Synchronoscope.
- 17. Write short notes on any two of the following:
 - a) Ammeter-voltmeter method for measurement of resistance.
 - b) Measurement of 'B' in a ring specimen.
 - c) Calibration of ammeter by using D.C. potentio meter.

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9.	A banking application is being developed using at the high level design of the application. Wh	nich of the following helps h		ank wants to look
	a) Case life cycle design	b) Decision design		
	c) A stage in a case life cycle	d) A requirements docu	iment	
10.	Match the following: (i, ii, iii with A, B, C)			
	i. The high-level mile stones of a case are ca			Case
	ii allows business users to see, and same way they think about it.			Stages
	iii is work that delivers a business of metaphor in Pega's model-driven approach	to application design.		Case life cycle design
	a) i-B, ii-C, iii-A b) i-C, ii-A, iii-B	c) i-A, ii-B, iii-C	d) i-B, ii-	A, 111-C
11.	In a loan management system, the customer a approval. If it is approved, the case will more rejected, the customer can apply again. What department for funds allotment?	ove to the accounts departi	ment for fi	unds allotment. If
	a) Alternate path b) Primary path	c) Rejection Path	d) Second	dary Path
12.	In a banking application, the number of prima process is 10. Which of the following ways w			
	a) Design all 10 stages in a single primary pa	nth		
	b) Design 5 stages in primary path and 5 in a	lternate path		
	c) Divide the stages into two meaningful deli	iverables, make two differen	nt cases and	d establish relation
	between the 2 cases.			
	d) Create 10 different cases with one stage in			
13.	In an insurance claim application, the custom should be given to manager for review. How		amount an	d the claim details
	a) By routing to the case to the Managerc) By routing to the work queue	b) By routing to the cud) By mailing the clair		ion to the manager
14.	Match the following on the basis of routing:			
	i. Customer needs to upload the resume afte	_	-	A. Specific user
	ii. Profiles are to be reviewed and selected by iii. Expense report can be approved by anyon		ger	B. Work queue C. Current user
	a) i-C, ii-A, iii-B b) i-B, ii-C, iii-A		4) : A ::	
		c) 1-B, 11-A, 111-C	d) 1-A, 11	-B, III-C
15.	Match the following:		A . F	1-45
	i. Customer request should be processed with		B. Go	calation action
	ii. Customer request must be processed with iii. If customer request is not processed with			ad line
	manager should get a mail of the status	ini 2 days, the respective	0.20	
	a) i-B, ii-C, iii-A b) i-C, ii-B, iii-A	c) i-A, ii-C, iii-B	d) i-A, ii	-B. iii-C
16				
10.	In an online book store application, there are be released. Which number of the version with a) Major b) Minor	-	rsion numb	
17			,	•
17	In a student management system, the stu- participations in various events etc. will be r the application will be present in which class	managed. The rules that des		
	a) Data class b) Work class	c) Integration class	d) @bas	e class
18	Lime Tree Technologies is a leading training		es training	s for employees of
10	different MNC's. Employer Enrolment is a called Employee Enrolment is created. T Enrolment case type. Then what do you call	a case type, and as part of the Employee Enrolment	ne lifecycle is a child	e, another case type
		c) Parent case		endent case

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19.	Choose the correct statement about requirements management. a) It is a continuous process throughout a project. b) It helps keep the project team organized. c) It helps ensure the business application you build validates and meets the needs of all customers and stakeholders. d) All the given options are correct
20.	TinyStars international school is automating the admission process using Pega. All activities starting from filling the admission form till admission confirmation are automated in the Pega application. In Pega, the basic template to model the entire admission process is called as
	a) Class b) Case c) Case Type d) Stage
21.	Get Well Hospitals is using a Pega application for Patient case processing. Every patient is considered as a case and the primary diagnosis reports will be uploaded into a case type, called Primary Record. If the patient is recommended for a specialist diagnosis, then it will be done in another case called Specialist Record. How do you achieve this in Pega? a) Create a Specialist Record case using create case utility as part of the life cycle of Primary Record
	b) Change the stage to new stage called Specialist Record c) Change the process flow to another case process flow d) Cannot be done in Pega
22.	Pavani Industries uses an application for their operations. The customers are complaining about the time taken by the application to show the product list. Now their requirement is to decrease the time taken to retrieve the product records, by 50%. What kind of a requirement is this? a) Functional b) Non-functional c) Change control d) Enterprise standard
23.	Match the following: i. Specifies how to achieve a need ii. Specifies what is the need iii. Works with interactive charts a) i-B, ii-C, iii-A b) i-C, ii-B, iii-A c) change control c) Sheet price standard c) Change control c) A. Analysis B. Specification C. Requirement c) iii-B, iii-C
24.	A student enrolled for a course called CSA, at certification stage student wants to postpone the CSA exam for one week, to achieve this which of the following options can be used? a) Add local action b) Add declare expression c) Add alternate stages d) Add correspondence
25.	Employee should be notified after the loan request has been successfully approved by manager, which of the following smart shapes can be used to notify employee? a) Change stage b) Send email c) Change case d) Create pdf
26.	John created a case type and wants to provide information to the end users to help them complete their work effectively. Which of the following options can be used? a) Add instructions b) Add process c) Add stages d) Add user actions
27.	Employee needs to submit multiple types of expenses with attributes such as expense item, expense amount, expense date etc. To capture this data for multiple types of expenses, one must configure a) Picklist b) Field group c) Field group list d) Text paragraph
28.	In online shopping when a customer adds a new product to the cart, the total price should be automatically calculated. To achieve this, which of the following can be used? a) Declarative processing b) Data transform c) Data management d) Decision tree
29.	is the mechanism of copying data within the case hierarchy. a) Decision table b) Data propagation c) Circumstancing d) Routing
30.	During case processing, each page remains in memory in a structure known as a) pyDefault b) Clipboard c) Tracer d) Live UI
31.	The data corresponding to a data type will be stored as, inside pyWorkPage of the case. a) Embedded page b) Child page c) pyDefault page d) Parent page
32.	There is a parent case type called "Passport Application" and a child case type called "Police Verification". The case data should be copied from parent case to the child case. To achieve this which of the following can be used?
	a) Data propagation option on parent case c) Data propagation option on child case b) Data page d) Declare expression

33.	allows you to add connectors and flow shapes that reference rules, even if those rules do not yet exists a) Connector mode b) Flow action mode c) Draft mode d) Flow mode
34.	Which of the following API Activities can be used for creating and sending emails? a) UpdateStatus b) Addwork c) CorrNew d) AddCoveredWork
35.	A student can submit the assignment in 5 days, but a student must finish the assignment within 7 days in any case. Even after 7 days if the student hasn't submitted his assignment, which of the following SLA options can be used to configure an additional day as extension?
	a) Goal b) Dead line c) Passed dead line d) All of the above
36.	is a list of open assignments for specific users. a) Worklist b) Workgroup c) Case process d) Work queue
37.	In a correspondence rule,icon is used to include content in other rules such as paragraphs, sections and correspondence fragments.
	a) Insert property b) Source c) Insert rule d) Pages & classes
38.	If we want to access a table with more advanced SQL queries like complex joins etc., we must use a) Database Table Class Mapping tool b) SQL Connector c) Report Definition d) Data Page
39.	Along with data transforms, we can use such that if a user indicates billing address and shipping address are same, then billing address values can be copied into shipping address. a) When condition b) Decision table c) Decision tree d) Map value
40.	 The approval process for a leave request case has the following conditions: i) If the leave duration is less than 10 days, then the leave request must be approved by the manager ii) If the leave duration is more than 10 days and the employee belongs to ABC department, then the leave request must be approved by HR manager iii) If the leave duration is more than 10 days and the employee belongs to ABC department, then the leave request must be approved by HR Senior Manager.
	Which decision rule can be used to model the above scenario as a best practice? a) Decision tree b) When rule c) Declare expression d) Activity
41.	A patient wants to add a doctor to a dispute resolution case. The receptionist selects the flow action to add the lawyer as an interested party. a) VOE b) addWorkObjectParty c) AddParty d) AddVOE
42.	Match the following w.r.t the source of a data page: i) Load activity A. return a specific data object mapped in the application B. obtain data from external data source C. used for special situations where none of the other options are suitable iv) Connector C. used for special situations where none of the other options are suitable D. to return a list of data objects mapped in the application b) i-B, ii-C, iii-D, iv-1 c) i-A, ii-B, iii-C, iv-D d) i-C, ii-D, iii-A, iv-B
43.	Match the below buttons of Tracer with appropriate functions: i. Remote Tracer ii. Watch iii. Breakpoints iii. Breakpoints iv. Settings A. Select rulesets, rule types and events to trace. B. To trace events in another requestor session C. Monitor a variable to detect when its value changes D. Identify when the application reaches a specific step in activity
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44.	is holds default urgency of case type and its default value is
45.	We can create single application with a responsive user interface that adapts to multiple devices. enables layout to automatically adjust to rendering devices such as elements can move around, resize or completely disappear depending on the resolution and size of a screen. a) Dynamic UI b) Responsive UI c) Harness d) Grid layout

46.	Applying of its design requirer		nat your application is de	livered on time and meets all
	a) Best practices	b) DBO	c) Requirements	d) Specifications
47.	You usea) Data transform	when you cannot predict of b) DCO		will enter in a form. d) Validation rules
48.		address. Which of the follow	ving options can be used	s to ensure that the end-user for this requirement? d) Work object
49.	nominee?" with a ch fields to collect inter		ects this checkbox, the sy onfigure this, which of th	
50.		de property references, for ex b) Dynamic UI		
51.	Every Pega UI is bu a) Harness rule		c) Portal rule	d) Layout
52.	as location, tax asses forms. When we use every time user ente	ssment, appraisal value and e, the home insur	land area etc., which are rance quote declare expre	than 20 property values such collected in large number of ession recalculates the value ag to display insurance quote
		, backward chaining , forward chaining		-
53.	is on business trip he		y leaves or checks any o ices we should use	et, so that when an employee ther updates. To provide this d) Complex process flows
54.	Match the following i. User pages ii. Data pages iii. System pages	A. conversion rates which a B. typically created and con	nfigured by the senior sy	rrency markets stem and lead system architects logged in user and their currer
	iv. Linked property a) i-C, ii- B, iii-A, iv		ges created due to user a -A c) i-A, ii-B, iii-C, i	v-D d) i-D, ii-A, iii-C, iv-D
55.	The state of the s	permissible values for data ors and allows for automation b) Connector		ting the input values to valid d) Data transform
56:	Pega applications st stores case data in a a) CLOB		cord in a relational databa	ase. Within each record, Pega d) DECIMAL
57.		re property values in a dedica		dedicated data fields and in a ase table, you must
58.		ving is a type of circumstanc		stancing
59.		life cycle. To achieve this v	we must configure?	d) Add optional process

60.	Which of the following are read-only properties in Pega? a) Properties that start with px and pz b) Properties that start with px and py c) Properties that start with pb d) Properties that start with py
61.	While filing a claim in a claims application, the customer has to enter the date when the incident occurred, and it must be a past date. To make sure that a person enters only past date but not future date, which of the following options can be used? a) Edit rule b) Validate rule c) Declare expression d) Data transform
62.	Which of the following smart shapes can be used to control stage transitions? a) Change step b) Change stage c) Change process d) Alternate stage
63.	Which of the following options can be used to select the rule types, rulesets, and events to trace? It also identifies when a step results in java exception or a status or fail or warn. a) Breakpoints b) Watch c) Settings d) Remote tracer
64.	retrieves data from the database and returns the results in a table of columns and rows. The rows represent records retrieved from database and columns contain data values in each record that you want users to see. a) Report definition b) Optimization c) Connector d) Integration
65.	PEGA-UAP wants to see the progress/report of System Architect Essentials course of only one particular college. Which of the following options can be used in this scenario? a) Declare expression rule b) Data Transform rule c) Filter option in a report definition rule d) Sort option in the report definition rule
66.	The class of Onboarding case type is TGB-HRApps-Work-Onboarding. Which of the following statements is/are true? i. TGB is a parent class of HRApps ii. Onboarding is a child class of TGB-HRApps-Work a) Both i and ii are true b) Only i is true c) Only ii is true d) Both i and ii are false
67.	The represents a substantial release of an application and this change encompasses extensive changes to application functionality. a) Minor Version b) Major Version c) Patch Version d) Application Version
68.	Pega groups rules according to their capacity for reuse. Each grouping is a a) Rule set b) Rule group c) Class d) Class group
69.	In an online book store application, there are some bugs which are to be fixed and a new version has to be released. Which of the following versions can be used to accommodate this requirement? a) Major b) Minor c) Patch d) Either major or patch
70.	In Earn Good banking application, the customer is asked to enter the type of loan in a text box. The values entered by the customer is not in the list of loan types provided by the bank. The loan rejection rate increased due to this problem. Now Earn Good bank wants to modify the UI to ensure that correct loan type is selected by the customers How do you address this problem, if the application is built on Pega? a) Giving different loan forms for different loan types b) Listing all loan types as a label beside the text box meant to enter the loan type c) Provide a picklist of all loan types so that user can choose from one of the listed types d) Provide the types of loans and descriptions in a document before coming to the loan form.

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