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UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, July 2020

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Course: Human Computer Interaction	**Semester: VIII**
Programme: B.TECH.(CSE), LL.B. (Hons.) Cyber Laws	
Course Code CSEG421	**Time: 03 hrs.**
Max. Marks: 100	

Question 1

Kiosks/installations (stationary): LCD screen (typical size: 10–13 in., resolution: low to medium) is well suited for

○   Spatial training, tele-experience and tele-presence, immersive entertainment

○   • TV-centric tasks, limited interaction, tasks that

need privacy (e.g., wild-gesture-based games in

the living room)

○ • Public users and installations, limited interaction,

short series of selection tasks, monitoring tasks

○ Simple, mobile, and short tasks, but those that require a relatively large screen (e.g., a sales pitch;)

1.5 points

Question 2

cognitive science _____

○ which explains the human's capability and model of conscious processing of high-level information and

○ explains how machine should be used much more efficiently

○ Both of the above

○ None of the above

1.5 points

Question 3

Smartphones/handhelds (mobile): LCD screen (typical size: 3.5–5 in., resolution: 720 × 1280 or higher, weight ≈ 120 g) is suited for

○ Office-related tasks, time-consuming/serious tasks, multitasking

○ • Simple and short tasks, special-purpose

tasks

○ Simple, mobile, and short tasks, but those that require a relatively large screen (e.g., a sales pitch)

○ • Suited for: Public users and installations, limited

interaction, short series of selection tasks,

monitoring tasks

2.5 points

Question 4

• Humans are known to have at least five senses.

Among them, those that would be relevant to HCI (at least for now) are the modalities of

○   • visual, aural, haptic

○   • visual, aural, haptic (force

feedback), and tactile sensation.

○   • visual, aural, tactile

sensation

○   • visual, haptic (force

feedback), and tactile

sensation

1.5 points

Question 5

The ISO standard for guiding the ergonomics aspects of HCI design

○   9221 document

○   9121 document

○   9001 document

○ 9241 document

1.5 points

Question 6

• GOMS stands for

○ Goals, Objectives, Methods, and Selection

○ Goals, Operators, Methods, and Selection

○ Goals, Objectives, Memory, and Selection

○ Goals, Objectives, Memory, and Subjects

1.5 points

Question 7

Pull down menu may be well suited for

○ Top level categorical menu

○ functional/operational task

○ Multiple choice/ exclusive choice

○ for expert users

1.5 points

Question 8

Check boxes and radio buttons are well suited for

○ Top level categorical menu

○ functional/operational task

○ Multiple choice/ exclusive choice

○ for expert users

1.5 points

Question 9

Vibration frequency of about Hz is said to be the optimal for comfort-able perception

○ 200

○ 100

○ 150

○ 250

1.5 points

Question 10

Ubiquitous platform _____

○ • in which everyday objects are
embedded with interactive
computing/networking devices and
services

○ • that provides near-realistic services
and experiences

○ • that provides high-quality interactive
services (based on its heavy-duty ultra
server level computing power) with
real-time response (based on the fast
network service)

○ • which we can carry around to compute

and communicate

2.5 points

Question 11

Humans can hear sound waves with frequency values between about _____

○ 20 and 200 Hz

○ 2 and 200 Hz

○ 20 and 2,000 Hz

○ 20 and 20,000 Hz

1.5 points

Question 12

Example of variables in CSS?

○ @color: #444;

○ #color: @444;

○ @color: &444;

○ @color: $444;

1.5 points

Question 13

IBM Watson computer that has beaten a human champion in the

○ quiz-show contest

○ chess-show contest

○　　vocabulary-show contest

　　○　　singing-show contest

2.5 points

Question 14

the camera or depth sensors (e.g., Microsoft® Kinect) are examples of the _____ method

　　○　　outside in

　　○　　inside out

　　○　　inside outside

　　○　　inside in

2.5 points

Question 15

EMG sensors are used to

　　○　　recognize motion gestures

　　○　　recognize tactile gestures

　　○　　recognize vibration gestures

　　○　　none of these

2.5 points

Question 16

WIMP in HCI refers to

　　○　　a painting software

　　○　　an image manipulating software

　　○　　windows, icons, menus, pointer

○ none of these

1.5 points

Question 17

The library of precisely prepared monochromatic icons and symbols, created with an emphasis on simplicity and easy orientation.

○ gyliph

○ Goth

○ Gliphy

○ Glyphicons

1.5 points

Question 18

auditory feed-back would require a _____ dB difference from the ambient noise to be heard effectively

○ 10–30

○ 15–20

○ 10–20

○ 15–30

1.5 points

Question 19

Virtual reality (stationary): Large-surround and high-resolution projection screen/head-mounted display/stereoscopic display, 3-D tracking sensors, 3-D sound system, haptic/tactile dis-play is well suited for

○ • Public users and installations, limited interaction,

short series of selection tasks, monitoring tasks

○ • TV-centric tasks, limited interaction, tasks that

need privacy (e.g., wild-gesture-based games in the

living room)

○ • Spatial training, tele-experience and tele-presence,

immersive entertainment

•

○ Simple, mobile, and short tasks, but those that require a relatively large screen (e.g., a sales pitch)

1.5 points

Question 20

• gulf of execution/evaluation, explains

○ how users can be left

bewildered (and not

perform very well) when an

interactive system does not

offer certain actions or does

not result in a state as

expected by the user

○ Such a phenomenon would be a result of an interface based on an ill-modeled interaction.

○ Both of the options

○ None of the options

1.5 points

Question 21

Examples of guidelines for govt. web page layout

○ Avoid cluttered displays

○ Establish level of importance

○ Place important items at top center

○ All of these

1.5 points

Question 22

IPTV stands for

○ Internet protocol television

○ Internet prompt based television

○ Internet prominent television

○ none of these

2.5 points

Question 23

The marker for the device of screen size >= 1200px

○ xs

○ md

○ sm

○ lg

1.5 points

Question 24

• This is a component that optionally captures the whole viewport and
renders the contents inside.

- ○ Span

- ○ Panel

- ○ Jumbotron

- ○ None of these

1.5 points

Question 25

UX stands for

- ○ User experience

- ○ Usage extreme

- ○ user extreme

- ○ none of these

2.5 points

Question 26

Toolbar menu may be well suited for

- ○ Top level categorical menu

- ○ functional/operational task

- ○ Multiple choice/ exclusive choice

- ○ for expert users

1.5 points

Question 27

One aspect of sensation and perception is _____, that is, how to make the user selectively (consciously or otherwise) tune in to a particular part of the information or stimulation.

○ Aural

○ Attention

○ Both of these

○ None of these.

1.5 points

Question 28

the _____ are distributed mainly in the periphery of the retina and are responsible for motion detection and less detailed peripheral vision

○ cones

○ rods

○ Both of these

○ None of these

1.5 points

Question 29

One of the markers for controlling and mentioning element and device sizes

○ xs

○ sm

○ lg

○ All of these

1.5 points

Question 30

the invention (or rediscovery) of the _____ that was the linchpin in the personal computer revolution, making the operation of a computer intuitive and much easier than the previous system of keyboard commands.

- ○ Pointing lasers

- ○ Keyboard

- ○ Touchpad

- ○ mouse

1.5 points

Question 31

• A navigation page is used primarily to help users

locate and link to destination pages.

- ○ True

- ○ false

- ○ partially true

- ○ None of these

1.5 points

Question 32

Syntactically Awesome Stylesheets is an example of

- ○ CSS preprocessor

- ○ CSS compiler

- ○ CSS machine code

- ○ None of these

1.5 points

Question 33

Bootstrap class for adding danger type style to a button

     ○   .button-dang

     ○   .button-danger

     ○   .btn-dang

     ○   .btn.danger

1.5 points

Question 34

Estimates of time taken for typical desktop computer operations from GOMS for thinking what to do (mental operator)

     ○   1200 ms

     ○   1500 ms

     ○   1800 ms

     ○   2100 ms

1.5 points

Question 35

Over 40% of the human brain is said to be involved with the processing of _____

     ○   Aural information

     ○   Haptic information

     ○   Visual information

     ○   Sensational information

1.5 points

Question 36

The visible area of a web page on the device or monitor the user is accessing on.

○ visiport

○ visibleport

○ viewwindow

○ viewport

1.5 points

Question 37

UI stands for

○ User Interaction

○ User Intellignece

○ User Intuition

○ User Interface

1.5 points

Question 38

many government web pages are now legally required to provide interfaces in different languages and for color-blind and visually challenged users is an example of

○ Universal acceptability

○ Universal adaptability

○ Universal usability

○ None of these.

1.5 points

Question 39

For clear and effective labeling of buttons and data-entry fields:

○ • Use consistent labeling.

○ Distinguish between required and optional data entry.

○ Place labels close to the data-entry field

○ All of these.

1.5 points

Question 40

Do not place "save" and "undo" buttons close together .

○ Usually

○ sometimes

○ doesn't matters

○ rarely

1.5 points

Question 41

Cloud computing platform:

○ • which we can carry around to compute and communicate

○ • in which everyday objects are embedded with interactive computing/networking devices and

services

○ • that provides near-realistic services

and experiences

○ • that provides high-quality interactive

services (based on its heavy-duty ultra

server level computing power) with

real-time response (based on the fast

network service)

2.5 points

Question 42

Intensity level of whisper in Decibel

○ 10

○ 20

○ 30

○ 40

1.5 points

Question 43

To facilitate navigation, designers should differentiate and group navigation elements and use appropriate menu types

○ Usually not required

○ Required depending on situations

○ Required

○ Not required at all

1.5 points

Question 44

• This is the most popular and easiest option for responsive design. In this pattern, larger screen multiple columns layout renders as a single column in a smaller screen in absolutely same s equence.

○ Column drop

○ Layout shifter

○ Fluid design

○ responsive design

1.5 points

Question 45

MAR stands for

○ Mixed and Augmented reality

○ Moon accelerated rating

○ Monotonically accelerated redundancy

○ none of these

2.5 points

Question 46

_____ are almost similar to panels, but with very less features and functionalities.

- O   pane

- O   div

- O   span

- O   wells

1.5 points

Question 47

The .img-rounded class adds border of radius _____ to the image

- O   2px

- O   4px

- O   6px

- O   8px

1.5 points

Question 48

Hot keys may be well suited for

- O   Top level categorical menu

- O   functional/operational task

- O   Multiple choice/ exclusive choice

- O   for expert users

1.5 points

Question 49

• The _____ is one of the most sensitive areas and
is frequently used for HCI purpose.

      ○   finger

      ○   Thumb

      ○   face

      ○   fingertip

1.5 points

Question 50

The magic number 8 in HCI refers to

      ○   The square matrix of rows and columns equal to 8

      ○   The matrix with column element's sum equal to 8

      ○   The matrix with row element's sum equal to 8

      ○   the limit of our short term memory

1.5 points

Question 51

The human FOV is nearly _____ in both the horizontal and vertical directions

      ○   90°

      ○   180°

      ○   270°

      ○   120°

1.5 points

Question 52

Tablet/pads (mobile): LCD screen (typical size: 7–10 in., resolution: 720 × 1280 or higher, weight ≈ 700 g) is well suited for

- ○ Office-related tasks, time-consuming/serious tasks, multitasking

- ○ • Simple and short tasks, special-purpose

  tasks

- ○ Simple, mobile, and short tasks, but those that require a relatively large screen (e.g., a sales pitch)

- ○ • Suited for: TV-centric tasks, limited interaction,

  tasks that need privacy (e.g., wild-gesture-based

  games in the living room)

1.5 points

Question 53

_____ released Bootstrap as open source.

- ○ Facebook

- ○ Google

- ○ Yahoo

- ○ Twitter

1.5 points

Question 54

This is a complex but powerful pattern in which the whole
layout of the screen contents get altered, in the case of smaller screen. This means that you need to develop different page layouts for large, medium, and small screens.

- ○ Column drop

- ○ Layout shifter

○ Fluid design

○ Responsive design

1.5 points

Question 55

The recommended ratio of the foreground to background brightness contrast is at least _____

○ 1:1

○ 2:1

○ 3:1

○ 4:1

1.5 points

Question 56

The _____, which are responsible for color and detail recognition

○ cones

○ rods

○ Both of these

○ None of these

1.5 points

Question 57

• Your users may not be habitual computer

users having many application windows open at

once may confuse them.

○ Yes its true

○ Sometimes

○ Only very rarely

○ Not at all

1.5 points

Question 58

For grouping a number of buttons together in Bootstrap

○ .button-group

○ .btn_group

○ .button_group

○ .btn-group

1.5 points

Question 59

EMG stands for

○ Electromyogram

○ Electromylogram

○ Electricmylogram

○ Electromylography

2.5 points

Question 60

Popular slideshow components available for use in Bootstrap.

○ Slide-show

○ Slide-panel

- ○ Slide-wells

- ○ Carousels