Paper / Subject Code: 82905 / Architecting of IoT



[Total Marks: 75]

- N.B.
- All questions are compulsory.
 Figures to the right indicate marks.
 - 3) Illustrations, in-depth answers and diagrams will be appreciated.
 - 4) Mixing of sub-questions is not allowed.

Attempt All . Q. 1

- (a)

i) Which domain	defines the archite	ecture view of IoT?	15. J.
a) Solution	b) Problem	c) system	d) M2M domain
domain	domain	domain	and the same of th
		(3)	The Co
ii) Which protoco	ol among the follow		
a) IPv4	b) DHCP	c)TCP	d)CoAP
	3		The state of
The state of the s	ork is very efficien	t, this is because of	f the
protocol it uses.		<u> </u>	
a) session	b) Routing	c) transport	d) network
, * P. S.	-75"	-3, N	2
,	a way of limiting the	he amount of electi	ricity going
through a circuit			
a) resistor	b) switch	c) hub	d) repeater
,		- ,	
v) CoAP has fourand separa	messaging modes: te.	confirmable, non-	confirmable,
a) protecting	b) viewing	c)messaging	d)piggyback
	3.		-
vi) IoT security m	nanagement includ	es	
a) Protocol	b) Simple and	c) Security with	d) Data storage
abstraction	fast installation	hardware	
	4		
vii) The is th	e next domain in th	ie WAN-MAN-LAN	hierarchy.
a) PAN	b) SAN	c) DAN	d) AAN
viii) PPP protocol	is also known as _	Prote	ocol
a) People to	b) Point to	c) physical to	d) person to
		physical	mandan
people protocol	Point	physical	person
people protocol	Point	physical	person

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a) Solution

domain

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view

c) functional

d) operational

view

b) analysis

domain

(b) Fill in { under securing i) ii) iii) iv) Q. 2 Attem (a) Define (b) What is system example (c) State and example (d) Elaborate (e) Describe (f) How do (g) Attempt (a) Discussion (b) Attempt (b) Discussion (c) Attempt (b) Discussion (c) Attempt (d) Discussion (d) Discussio	the blanks lerwater, 64 ity } In sender to r IoT gatewa CARP is a c	b) Devices I, simplex, Protoco communication mo receiver and receive ay must provide distributed routing	c) work of abstraction, Full ode, communication ver to sender at san	d) delete -duplex, 128, MAC n occurs from ne time.	(5M)
(b) Fill in { undo securi i) ii) iii) iv) 2.2 Attem a) Define b) What i system c) State a exampl d) Elabora e) Describ How do 3.3 Attemp a) Discuss	the blanks lerwater, 64 ity } In sender to a loT gatewa CARP is a c	communication more receiver and receiver and more ceiver and receiver and receiver and receiver and must provide	ol abstraction, Full ode, communication ver to sender at san	-duplex, 128, MAC	(5M)
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(under securi i) ii) iii) iv) 2. Attem a) Define b) What is system c) State a example i) Elabora c) Describ i) How do 3. Attemp i) Discussi	erwater, 64 ity } In sender to 1 IoT gatewa CARP is a c	communication mo receiver and receiv ay must provide distributed routing	ode, communicatio ver to sender at san	n occurs from	(5M)
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i) ii) iii) iv) v) 2 Attem b) What is system c) State a example d) Elabora e) Describ How do 3 Attemp Discuss	In o sender to i IoT gatewa CARP is a c	receiver and receiv ay must provide _ distributed routing	er to sender at san	n occurs from ne time.	
v) v) Attem Define System State a examp Describ Describ How do Attemp	sender to a loT gatewa CARP is a c	receiver and receiv ay must provide _ distributed routing	er to sender at san	ne time.	
v) v) Attem Define System State a examp Describ Describ How do Attemp	IoT gatewa CARP is a c	ay must provide distributed routing	. 8		
v) v) Attem Define System State a examp Describ Describ How do Attemp	CARP is a c	distributed routing			
v) 2. Attem a) Define b) What is system c) State a exampl d) Elabora e) Describ d) How do d. Attemp	c		protocol designed	for	
v) 2. Attem a) Define b) What is system c) State a exampl d) Elabora e) Describ How do 3. Attemp) Discuss	IDDD cor	communication.			
v) 2. 2 Attem a) Define b) What is system c) State a exampl d) Elabora e) Describ) How do 3. Attemp d) Discuss	IEEE 802.1	5.4 is the most cor	nmonly used IoT st	tandard for	
2. Attem a) Define b) What is system c) State a example d) Elabora e) Describ) How do 3. Attempton Discussion			d'and	C. Committee	
a) Define b) What i system c) State a exampl d) Elabora e) Describ How do Attemp) Discuss	IPv6 is	_bit protocol.			
Define b) What i system c) State a exampl l) Elabora l) Describ l How do l Attemp					
Define b) What i system c) State a exampl l) Elabora l) Describ l How do l Attemp	nt the felle	······································	-		
b) What is system system example Elabora Describ How do Discussion	-	owing (Any THRE	•		(15M
system c) State a exampl d) Elabora c) Describ d) How do d		2M and discuss its			
example Elabora Describ How do Attemp Discuss	is an ior Ai isolution,	rchitectural view?	Discuss reference	architecture for a	
Elabora Describ How do Attemp Discuss	and explair	n problem and so	olution domain po	ortioning with an	
e) Describ) How do . 3 Attemp) Discuss		vork application re	gistration process		
How do Attemp Discuss		eat labelled diagran	-	tecture.	
) Discuss		es work? List and e			
	pt the follo	wing (Any THREE))		(15M)
	s 802.11 pro	otocol architecture	in brief.		(23/4)
) Justify t		WLAN? Describe it			
) Define a		e following terms	,		
	a. BSS	does it differ from	the standard Rlugi	tooth?	
	a. BSS b. ESS			of Dash7 network.	



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- (f) How do Dash7 components communicate with each other? Explain in detail.
- Q. 4 Attempt the following (Any THREE)

(15M)

- (a) Distinguish between TCP and UDP.
- (b) List and explain characteristics of Stream Control Transmission Protocol (SCTP).
- (c) Define the term Congestion control. Explain in brief Datagram Congestion Control Protocol.
- (d) Illustrate the working of Extensible Messaging Presence Protocol.
- (e) Discuss in brief about the Broadband Forum.
- (f) Identify different transport layer protocols. Explain UDP with its key points.
- Q. 5 Attempt the following (Any FIVE)

(15M

- (a) Elaborate on CRUD? Discuss its advantages and disadvantages.
- (b) Differentiate between unicast and multicast addresses.
- (c) Discuss Multipath TCP with its key points
- (d) Explain an example of CEP- Complex Event Processing
- (e) Compare between TCP and UDP.
- (f) Define following terms
 - 1. Computer network
 - 2. Internet of Things
- (g) What is NAT? List its uses.
- (h) Determine functions of HTTP?

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