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1. IP stands for:

1 / 1 point

- ☐ Interesting Perspectives
- ☐ Included Programs
- ☒ Intellectual Property
- ☐ Insidious Problems

Correct
Correct!

2.

1 / 1 point

IP cores can be included in a design by: (Mark all that apply)

2.

1 / 1 point

IP cores can be included in a design by: (Mark all that apply)

☒ Using system level design tool like Qsys

✓ Correct
Correct!

☐ C code compiled in Eclipse SBT

☒ adding IP as a block diagram element

✓ Correct
Correct!

☒ Instantiating the cores in an HDL design

✓ Correct
Correct!

3.

1 / 1 point

Which FPGA Vendors offer IP as part of their design tools? (Mark all that apply)

☒ Xilinx

Correct
The leader offers many free IP cores in Vivado

☒ Intel Altera

Correct
many free IP cores in Quartus

☒ Microsemi

Correct
many free IP cores in Libero

☒ Lattice

Correct
many free IP cores in Diamond

4. 1 / 1 point

Which Processors are available as IP cores? (Mark all that apply)

☒

8051



Correct

8051 has been available for a long time

☒

ARM Cortex-M1



Correct

ARM developed the Cortex-M1 specifically for FPGAs

☐

Intel Core i7

☒

RISC-V



Correct


RISC-V is an open source soft processor

5.

1 / 1 point

Which Processors are available as IP cores? (Mark all that apply)

☒ 68CH11


 **Correct**
the 68CH11 is available

☐ ARM Cortex-M0+

☒ 80186

 **Correct**
the 80186 is available from several sources

☒ MicroBlaze

 **Correct**
MicroBlaze is available from Xilinx

6. 1 / 1 point

In Quartus, IP cores can be instantiated as: **(Mark all that apply)**

☒ Verilog code

Correct
Correct!

☒ VHDL code

Correct
Correct!

☐ Swift code

☐ Javascript code

7. 0.5 / 1 point

Which of the following is a limitation on use of some IP Cores? **(Mark all that apply)**

☒ Programmed file will expire after a limited time when in evaluation mode.

7. 0.5 / 1 point

Which of the following is a limitation on use of some IP Cores? (Mark all that apply)

☒ Programmed file will expire after a limited time when in evaluation mode.

☒ Correct
The Programmed file will expire after a limited time when in evaluation mode. This approach is taken by several vendors

☐ There are no limits on IP Core use.

☒ Core will synthesize but not route.

☒ This should not be selected
Cores that synthesize are always available to be routed.

☐ Core will simulate but not synthesize.

8. 1 / 1 point

Which Bus Types are available as IP? (Mark all that apply)

☒ VME

8.

1 / 1 point

Which Bus Types are available as IP? (Mark all that apply)

☒ VME

✓ Correct

VME is available from several FPGA vendors.

☒ AHB

✓ Correct

AHB is available from most FPGA vendors

☒ Avalon

✓ Correct

Avalon is available from Intel Altera

☒ AXI

✓ Correct

AXI is available from most FPGA vendors

☐ CompactPCI

☐ CompactPCI

9. 1 / 1 point

Intel Altera IP cores are available: (Mark all that apply)

☒ in Evaluation mode

☒ Correct
Correct! The program file will expire if in the evaluation mode and a purchased version of the IP can be delivered that has no time limit.

☒ from third-parties

☒ Correct
This is correct.

☒ for free

☒ Correct
Some IP cores are available at no cost with Quartus IP Catalog

☐ None of the above

10.

1 / 1 point

DDR Memory Controllers can come as:

- ☐ Only soft Cores
- ☐ Only hard Cores
- ☒ Either soft cores or hard cores
- ☐ None of the above

✓ **Correct**
This is correct!

11.

1 / 1 point

What is the benefit of using IP cores?

- ☐ Cost saving
- ☐ Vigorously Tested
- ☐ Ease of use
- ☒ All of the above

12.

0.8 / 1 point

Which Memory Types are available as IP? (Mark all that apply)

☒ SRAM

✓ Correct
SRAM is available from many vendors.

☒ Read-Only Memory

✓ Correct
Read-Only Memory is available from many vendors.

☐ Write-Only Memory

☐ Hybrid Memory Cube

☐ MRAM

You didn't select all the correct answers